Founder of the NOBEL Prize

On the eve of his 190th Birth Anniversary

Alfred Bernhard NOBEL

https://www.nobelprize.org/alfred-nobel/

Alfred Nobel had loathed war all his life and was stunned when his obituary referred to him as a "merchant of death." He vowed that he would not be remembered as such! So he decided to leave his immense fortune to foster science, literature and peace. The Nobel Prizes were born ! All because a journalist did not check his facts.

Department of Chemistry

Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
DEEMED TO BE UNIVERSITY
University with Graded Autonomy Status
(An ISO 21001 : 2018 Certified Institution)
Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.

ACCREDITED WITH GRADE A+ NAAC

Alfred Bernhard Nobel

Founder of NOBEL Prize

Compiled by:
Dr S Valliammai
Head - Department of Chemistry
Dr L Ramapriya
Asst Prof : Dept of Chemistry
Prof Dr S Ramalingam
Joint Registrar - Languages

"Le marchand de la mort est mort"

(The merchant of death is dead).

[In 1888 the Paris press reported Nobel's death with this headline:]

Department of Chemistry

Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
DEEMED TO BE UNIVERSITY
University with Graded Autonomy Status
(An ISO 21001 : 2018 Certified Institution)
Periyar E.V.R. High Road, Maduravoyal, Chennai-95. Tamilnadu, India.

Alfred Bernhard NOBEL

Founder of NOBEL Prize

All rights are reserved. No part of the publication may be reproduced, stored in a retrieval system (including but not limited to computers, disks, external drives, electronic or digital devices, e-readers, websites), or transmitted in any form or by any means (including but not limited to cyclostyling, photocopying, docutech of other reprographic reproductions, mechanical, recording, electronic, digital versions) without the prior written permission of the publisher, not be otherwise circulated in any form of binding or cover other than that in which it is published and without a similar condition being imposed on the subsequent purchaser.

May 2024

Published by:
Department of Chemistry
Dr MGR Educational and Research Institute
[Deemed to be University]
Maduravoyal, Chennai - 600 095

Funded by:

1916 2016
ந சுப்பு ரெட்டியார் 100
Centenary Committee Publications
AD-13, 5th Street, Anna Nagar West
Chennai – 600 040, Tamil Nadu

ISBN: 978-93-95054-85-0

ISBN 978-93-95054-85-0
9 789395 054850 >

Printed at:
DJ Printers, Chennai – 600 095

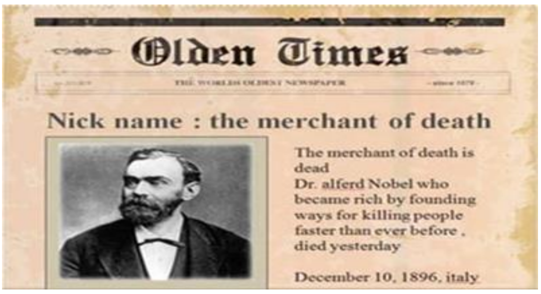
Prof Dr S Geethalakshmi
Vice-Chancellor
Dr MGR Educational and Research Institute
Maduravoyal, Chennai – 600 095

He lives on today, of course, through what are widely regarded to be the most prestigious awards given for intellectual achievement in the world. Here's a brief look at the famous scientist, inventor, industrialist and founder of the annual honour that recognizes those who have conferred "the greatest benefit to humankind".

Alfred Nobel, (born 21 Oct 1833, Stockholm, Sweden - died 10 Dec 1896, San Remo, Italy), Swedish chemist, engineer, and industrialist. His attempts to find a safe way to handle nitro-glycerine resulted in the invention of dynamite and the blasting cap. He built a network of factories to manufacture dynamite and corporations to produce and market his explosives. He went on to develop more powerful explosives and to construct and perfect detonators for explosives that did not explode on simple firing (e.g., when lit with a match). Nobel registered more than 350 patents, many unrelated to explosives (e.g., artificial silk and leather). A complex personality, both dynamic and reclusive, he was a pacifist but was labelled the "*merchant of death*" for inventing explosives used in war. Perhaps to counter this label, he left most of his immense fortune, from worldwide explosives and oil interests, to establish the Nobel Prizes, which would become the most highly regarded of all international awards.

"*If I have a thousand ideas and only one turns out to be good, I am satisfied.*" This was quoted by one of the greatest Chemists- Alfred Nobel and the quote by itself is a reflection about his biography.

There are many different theories about why the Nobel created the prize. A Nobel Prize winner himself, Albert Einstein, said that "*Alfred Nobel invented an explosive more powerful than any then known—an exceedingly effective means of destruction. To atone for this 'accomplishment' and to relieve his conscience, he instituted his award for the promotion of peace.*" This is a commonly held belief.



Olden Times

Nick name : the merchant of death

The merchant of death is dead
Dr. alferd Nobel who became rich by founding ways for killing people faster than ever before , died yesterday

December 10, 1896, italy

Nobel held the naive belief that once the carnage of targeted explosions was unleashed upon the field, his explosives might bring a swift end to wars and battles. When one of his brothers died in 1888, a French newspaper mistakenly ran "The merchant of death is dead" about Alfred. This event is believed to have played a role in solidifying Nobel's thoughts on using his wealth to create a better legacy.

A true renaissance man Alfred Bernhard Nobel inspired the Nobel Prize, a collection of five prizes awarded in multiple categories, including the peace prize, to "those who, during the preceding year, shall have conferred the greatest benefit on mankind." Nobel built his vast fortune and success on creating munitions and explosives, including patenting nitro-glycerine, but he was devoted to the pursuit of peace and considered himself a pacifist.

It is really a noble task to venture a book on Alread Nobel covering his life, patterns and so many activities in his life. Well appropriately, the first chapter [Articles on Alfred Nobel] contains 17 articles by the Editors of Nobel Committee, covering his life and work (11) and his industrial activities (6). Several web links herein may help the readers to venture further to know more about him. A brief detail of his 87 Patents – 29 Swedish and 58 English - is provided in the second chapter.

The complete details of 11 Nobel Laureates of 2013 are given with their photos. Another feature is that the list of ALL Nobel Laureates from 1901 to 2022, providing their photos, country of origin, area of their contributions, etc is given. Chapter-6 provides the original will of Alfred Nobel along with the English translations. Next chapter [19 pages] contains several photos and pictures covering the life and contributions of Alfred Nobel.

"INDIANS – Nobel Prize" [Chapter-16] contains information about the Indians, Indian origin, Indians in British Raj, etc., who got Nobel prize. The next chapter on "Malala Yousafzai" - the youngest to get the Nobel Prize – is very interesting as it contains about her life, her speeches at the several occasions & countries with photographs, etc.

One must read the Chaptrer-9: "Mahatma Gandhi - The Missing Laureate". It provides the details from Nobel Committee as to why no prize was given to him, reasons, etc., The web link provided herein gives the detailed narration by the Nobel Committee.

Chapter-18 [Nobel Triumvirs 2011 & Our University] provides the important information: conducting an international seminar on "WE 360o" on the eve of International Women's Day (8 March 2012) by the Faculty of Management Studies of our University, receiving 87 papers on various important themes on women, publishing the book with ISBN, etc.,

Through the relevant web links wherever necessary, in all chapters, the readers and other stakeholders would be highly benefitted. I congratulate and appreciate the Department of Chemistry and also the authors in preparing and publishing the book.

30 April 2024
Chennai – 600 095

Prof Dr S Geethalakshmi
Vice-Chancellor

PREFACE

One thousand times more powerful than black powder, dynamite expedited the building of roads, tunnels, canals, and other construction projects worldwide in the second half of the 19th century. Today its inventor’s name is well known, but more for prizes of peace and of achievement than for explosives.

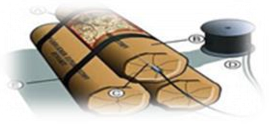
In the 18th and early 19th centuries the growing understanding of gases and the reactions that produce them was of great importance to modern industrial society. Not least was the production of explosives—substances that undergo reactions involving the release of heat and rapidly expanding gaseous products.

Nobel Prize, any of the prizes awarded annually by four institutions (three Swedish and one Norwegian) from a fund established under the will of Alfred B. Nobel. The will specified that awards should be given “to those who, during the preceding year, shall have conferred the greatest benefit on mankind.” Since 1901, prizes have been awarded for physics, chemistry, physiology or medicine, literature, and peace; since 1969, a sixth prize, established by the Bank of Sweden, has been awarded in economic sciences. The Nobel Prizes are regarded as the most prestigious prizes in the world.

He was born in Stockholm, Sweden on October 21, 1833. His father was Immanuel Nobel and his mother was Andriette Ahlsell Nobel. His father was an engineer and inventor. Immanuel Nobel built bridges, buildings, and experimented with several ways of blasting rocks.

When Alfred Nobel was a child, he was prone to illness but he enjoyed a close relationship with his mother. He had an intellectual curiosity from an early age. He had an interest in explosives and he learned the fundamentals of engineering from his father.

Immanuel's business ventures suffered losses and then he moved to St. Petersburg, where he started business as a manufacturer of explosive mines and machine tools. His family left Stockholm in 1842 and came to St. Petersburg. Alfred, at the age of 17, could speak and write in Swedish, Russian, French, English, and German.



He patented the explosive nitroglycerin, founded several companies, and patented dynamite and gelignite, among other accomplishments. Shortly after Nobel died in 1896, the Nobel Prize came into existence. He left much of his large estate built on the proceeds of explosives and munitions to establish the prize, which was first awarded in 1901.

Alfred Nobel patented well over 300 inventions–several of which involved explosives–in the fields of biology, physiology, and optics. His success led him to establish numerous business corporates, including Nitroglycerin AB in Stockholm, the Alfred Nobel & Co. Factory in Krümmel, and the United States Blasting Oil Company.

Despite his contributions to explosives technology, Alfred Nobel was a strong promoter of world peace. Countess Bertha Kinsky, another strong advocate of peace, influenced Nobel's pacifist tendencies. The Countess and Nobel became good friends when she worked briefly as his private secretary.

It is, normally, a very difficult job to bring the profile of Alfred Nobel within a single book. But, with several web links especially the web link https://www.nobelprize.org/alfred-nobel/ and other inter-related web links, a reasonable profile is attempted by the authors.

As the latest information, the complete details of Nobel Laureates of 2013 (11 persons) have been provided in an attempt to update the younger generation of the 21st century (Chapter-3). The technical and other personal details of Alfred Nobel (his patents, will, etc.,) are available. Pictures and photos (Chapter-4, running to 19 pages) cover his family tree, his places of living in Stockholm, St Petersburg and Rome, his laboratories, his experimental places, lakes, mines, etc., which would cause interest among the readers and make them to proceed further to know more about him.

Chapter-9 [*Mahatma Gandhi - The Missing Laureate*] has the international interest as it covers the detailed information as to why/how Nobel Committee missed him.

Chapter-16 [*INDIANS – Nobel Prize*] gives a list of Indians who got Nobel prizes with b their brief history, list of Nobel Laureates of different category such as: Citizens of British India, Indian citizens, Diaspora, Expatriates, details of Nobel Laureates and other relevant web links.

Chapter-17 [*Malala Yousafzai*] provides the details of her who was the youngest Nobel Laureate with brief background with details, some photos with her family members, web links to her famous speeches on several occasions and a list of honours & awards she received and a web link leading to receiving her Nobel Prize.

Chapter-18 contains the details as to how our Faculty of Management Studies was celebrating the THREE Nobel Peace Laureates in 2011 [women] by releasing a book **"WE 360°"** containing 87 papers received during the seminar conducted on the eve of International Women's Day 2012 [8 March 2012].

We do acknowledge with gratitude the Foreword given by Prof Dr S Geethalakshmi, Vice-Chancellor, Dr MGR Educational and Research Institute. Also, we do hope that the contents herein would be found very useful by all the stakeholders.

Any appreciative and useful suggestions/additions are always welcome.

Authors

Contents

S.No.	Details	Page
01	**Alfred Nobel's Life** Containing 17 Articles by Editors of Nobel Committee: (Life & Work=11 and Industrial Activities = 6) and, other important web links	1
02	**His Patents** Here is a list of 29 Swedish and 58 English patents.	4
03	**2023: Nobel Prize** Here provided the details of all 11 Nobel Laureates in 2023: Physics-3, Chemistry-3, Physiology/Medicine-2, Economic Science-1, Literature-1 and Peace-1	11
04	**Quotes of Alfred Nobel** Here, some of his famous quotes with his own explanation are provided. Web links for some interesting quotes in 10 topics are given.	16
05	**Time LINE** *Most of the important events in his life are given. Also, several web links covering his life, events, etc., are provided.*	24
06	**WILL of Alfred Nobel** *Pictures of all four pages of his Will [handwritten], the corresponding text in English and the list of witnesses are given.*	27
07	**Pictures of Alfred Nobel** His Family tree, several pictures of his place of living in Stockholm, Rome & St Petersburg, his laboratory, an explosion in his laboratory, tunnel, industrial activities, factory, lake, mines, his experimental places & his monument in New York City.	35
08	**NOBEL PRIZE – Brief Details** Life, work, some photos, samples of Nobel medals, some important web links.	53
09	**MAHATMA GANDHI: The Missing Laureate** Providing the relevant details regarding why/how the Nobel Committee missed him!	57
10	**List of Laureates – Physics** Contains Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	60

11	List of Laureates – Chemistry Providing Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	98
12	List of Laureates – Medicine/Physiology Contains Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	129
13	List of Laureates – Literature Contains Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	160
14	List of Laureates – Peace Contains Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	190
15	List of Laureates – Economic Sciences Contains Photos, year of Nobel Prize, Country & area of rationale behind the award [1901 – 2023]	207
16	INDIANS – Nobel Prize Brief history, List of Nobel Laureates of different category such as: Citizens of British India, Indian citizens, Diaspora, Expatriates, Details of Nobel Laureates and other relevant web links.	228
17	Malala Yousafzai Brief background with details, some photos with her family members, web links to her famous speeches on several occasions and a list of honours & awards she received & a web link leading to receiving her Nobel Prize.	245
18	Nobel Triumvirs 2011 & Our University Honouring these THREE Nobel Laureates [women], Faculty of Management Studies conducted a Seminar "WE 360°" on the eve of International Women's Day 2012. Several pictures, book's wrappers and the list of 87 papers received are provided. Dr A Kalyani, Vice-Chancellor, Tamil Nadu Open University had given the 'Foreword' to the book.	253
19	Alfred Nobel – A Profile Providing several interesting and important information with rare photos of medals, etc.,	275

Alfred Nobel's Life

Alfred Nobel (1833-1896) was born in Stockholm, Sweden, on 21 October 1833. His family was descended from Olof Rudbeck, the best-known technical genius in Sweden in the 17th century, an era in which Sweden was a great power in northern Europe. Nobel was fluent in several languages, and wrote poetry and drama. Nobel was also very interested in social and peace-related issues, and held views that were considered radical during his time. Alfred Nobel's interests are reflected in the prize he established. Learn more about his life and his interests – science, inventions, entrepreneurship, literature and peace work.

The following is a list of articles compiled by the editors of Nobelprize.org, covering his life, work and other industrial activities; here the names of the editors, names of the articles and the corresponding web links are provided to enable the readers to reach and read these articles.

No.	Narrative Details
[I] Alfred Nobel's Life and Work	
1	Alfred Nobel's life and work – for grade-schoolers On October 21, 1833 a baby boy was born in Stockholm, Sweden who was to become the founder of the Nobel Prize https://www.nobelprize.org/alfred_nobel/biographical/articles/life-work/gradeschool.html
2	Alfred Nobel – his life and work By Nils Ringertz Alfred Nobel was born in Sweden, grew up in Russia, studied chemistry and technology in France and the US https://www.nobelprize.org/alfred-nobel/alfred-nobel-his-life-and-work/
3	Alfred Nobel – St. Petersburg, 1842-1863 By Birgitta Lemmel The young Alfred grew up, received his education and was shaped as a human being in the cosmopolitan atmosphere of St. Petersburg https://www.nobelprize.org/alfred-nobel/alfred-nobel-st-petersburg-1842-1863/

4	Alfred Nobel’s health and his interest in medicine By Nils Ringertz “Isn’t it the irony of fate that I have been prescribed N/G 1 (nitroglycerine) to be taken internally!” https://www.nobelprize.org/alfred-nobel/alfred-nobels-health-and-his-interest-in-medicine/
5	Alfred Nobel and his interest in literature By Åke Erlandsson Alfred Nobel’s collection of books bears testimony to both the depth and breadth of his reading https://www.nobelprize.org/alfred-nobel/alfred-nobel-and-his-interest-in-literature/
6	Alfred Nobel – the poet By Åke Erlandsson Alfred Nobel’s collection of books bears testimony to both the depth and breadth of his reading https://www.nobelprize.org/alfred-nobel/alfred-nobel-the-poet/
7	Alfred Nobel – life and philosophy By Tore Frängsmyr Alfred Nobel went through philosophy from antiquity to modern times, pointing out what he perceived to be vital issues https://www.nobelprize.org/alfred-nobel/alfred-nobel-life-and-philosophy/
8	Alfred Nobel’s thoughts on war and peace By Sven Tägil Was Alfred Nobel’s view on the effects of weapons to deter war a comfortable way of defending his own activity? https://www.nobelprize.org/alfred-nobel/alfred-nobels-thoughts-about-war-and-peace/
9	Alfred Nobel’s house in Paris By Birgitta Lemmel At forty years old, Alfred Nobel bought an elegant mansion in Avenue Malakoff, a fashionable quarter near the Arc de Triomphe and Bois-de-Boulogne https://www.nobelprize.org/alfred-nobel/alfred-nobels-house-in-paris/
10	Alfred Nobel’s final years in San Remo By Lorenette Gozzo Alfred Nobel died in his villa overlooking the Mediterranean in Sanremo, Italy https://www.nobelprize.org/alfred-nobel/alfred-nobels-final-years-in-sanremo/
11	The Private Library of Alfred Nobel https://www.nobelprize.org/alfred-nobel/the-private-library-of-alfred-nobel/

	[II] Alfred Nobel’s Industrial Activities
12	Alfred Nobel’s industrial activities in Vinterviken By Birgitta Lemmel Alfred Nobel’s first company, Nitroglycerine Aktiebolaget, had its explosives plant on an isolated inlet of Lake Mälaren https://www.nobelprize.org/alfred-nobel/alfred-nobels-industrial-activities-in-vinterviken/
13	Alfred Nobel in Krümmel By Birgitta Lemmel Alfred Nobel established his first overseas company in Krümmel, Germany https://www.nobelprize.org/alfred-nobel/alfred-nobel-in-krummel/
14	Alfred Nobel in Scotland By John E. Dolan Alfred Nobel turned his sights to Scotland when Great Britain proved to be a difficult place to establish an explosives factory https://www.nobelprize.org/alfred-nobel/alfred-nobel-in-scotland/
15	Alfred Nobel in Sevran By Birgitta Lemmel Looking for a suitable location for his experiments near his home, Alfred Nobel found Sevran, 16 kilometers northeast of Paris https://www.nobelprize.org/alfred-nobel/alfred-nobel-in-sevran/
16	Alfred Nobel’s dynamite companies By Ragnhild Lundström Alfred Nobel established the first international holding company in the world, the Nobel Dynamite Trust Company https://www.nobelprize.org/alfred-nobel/alfred-nobels-dynamite-companies/
17	List of Alfred Nobel’s Patents https://www.nobelprize.org/alfred-nobel/list-of-alfred-nobels-patents/

Also, visit the following web links to know MORE about him:

[01] https://www.nobelprize.org/alfred-nobel/alfred-nobels-life-and-work/

[02] https://www.nobelprize.org/alfred-nobel/biographical-information/

His Patents

Swedish chemist, inventor, engineer, entrepreneur and business man **Alfred Nobel** had acquired 355 patents worldwide when he died in 1896. He invented dynamite and experimented in making synthetic rubber, leather and artificial silk among many other things. Here is a list of 29 Swedish and 58 English patents.

[A] Swedish Patents

1863. Patent number 1261. Ways to prepare gunpowder.

1864. Patent number 668. Method for the blasting of nitroglycerine. (Application not completed.)

1864. Patent number 63. Improvements of process of preparing and use of gunpowder.

1866. Patent number 99. Ways to prevent freezing of nitroglycerine.

1867. Patent number 102. Dynamite or Nobel's gunpowder.

1876. Patent number 1352. Ways to make solid explosives from nitroglycerine, denominated gelatinated nitroglycerine.

1889. Patent number 2158. Ways to produce nitroglycerine containing explosive matter. (Ballistite or Nobel's gunpowder.)

1890. Patent number 2752. Ways to produce nitroglycerine containing explosive matter. (Ballistite or Nobel's gunpowder.)

1894. Patent number 5671. Ways to produce substitutes for caoutchouc, gutta-percha, leather and varnishes.

1894. Patent number 227. Safety fuzes. (Application not completed.)

1894. Patent number 228. Method for sealing of projectiles and for preventing gas leakage and burnouts in the firearms. (Application not completed.)

1894. Patent number 229. Welding and soldering of metals. (Application not completed.)

1894. Patent number 394. Pipes, shafts, cannons and other heavy metal pieces of wire welded together. (Application not completed.)

1894. Patent number 845. Sound and recoil inhibitors for firearms. (Application not completed.)

1894. Patent number 1324. Hardening. (Application not completed.)

1895. Patent number 7096. Devices for sealing of projectiles and prevention of gas leakage and burnouts of firearms.

1895. Patent number 6627. Methods for internal forging of firearm barrels and other tubular metal pieces, intended to endure great strain.

1896. Patent number 7552. Progressive smokeless gunpowder and ways to prepare it.

1896. Patent number 447. Gunpowder. (Application not completed.)

1896. Patent number 8347. Fuzes for explosive projectiles.

1896. Patent number 808. Projectile with rocket engine, lit by a timed ignition. (Application not completed.)

1896. Patent number 8237. Press nozzles, tiles and other objects with fine holes of predetermined finite diameter and the method of producing such.

1896. Patent number 1122. Rocket device with engine. (Application not completed.)

1896. Patent number 1231. Ways to provide pressure on pistons at forging presses and similar machines. (Application not completed.)

1896. Patent number 8390. A device for machines for drilling holes in blocks for guns, axes, and other metal pieces.

1897. Patent number 9773. Nitrocellulose gunpowder and ways to prepare it.

1897. Patent number 9775. Progressive gunpowder and ways to prepare it.

1897. Patent number 10257. A. Nobel and W.T. Unge: Self-propelling and self-rotating projectile.

1897. Patent number 10036. A. Nobel and W.T. Unge: Firearms with self-propelling and self-rotating projectiles (rockets and similar).

[B] English Patents

(Provisional Patents are not on the list)

1857. Patent number 2507. Gas meter.

1859. Patent number 177. Apparatus for measuring water or other liquids.

1859. Patent number 556. Construction of barometer or manometer, with the aim of creating a cheap and easy to transport pressure gauge.

1863. Patent number 2359. Improvements in the production of “gunpowder” (black powder), and blasting powder.

1864. Patent number 1813. Improvement in the production and use of nitroglycerine.

1867. Patent number 1345. Improved explosive and primer for the same. Dynamite.

1869. Patent number 442. Explosives. Nitroglycerine is added to a mixture of combustible substances which are not explosive in themselves, such as powdered saltpeter or coal.

1873. Patent number 1570. Improvement in the production of explosives. Small amounts of paraffin wax, stearin and similar substances may be added to the explosive mixtures and prevent exudation of nitroglycerine.

1874. Patent number 4342. Method for producing sulfuric acid.

1875. Patent number 153, 2523. Burner for lighting purposes.

1875. Patent number 4179. Improved explosive (blasting gelatine or gelatine dynamite).

1879. Patent number 224. Apparatus for gasification of liquids.

1879. Patent number 226. Production of explosives.

1879. Patent number 227. Container for hygroscopic (moisture-sensitive) explosives.

1879. Patent number 2314. Purification of pig-iron.

1879. Patent number 2399. Enhancement of the production of explosives. Pressed black powder has a greater effect in rock blasting if the explosion is triggered using a specially prepared detonator.

1879. Patent number 2880. Apparatus for production of steam or distillation of liquids.

1879. Patent number 4104. Apparatus for the concentrating of acids.

1884. Patent number 5383. Improvement upon evaporation and concentration of liquids.

1884. Patent number 10860. Improvement in the production of fuming sulfuric acid.

1885. Patent number 5252. Treatment of explosives. Nitroglycerine can be dissolved in a non-volatile solvent with a boiling point higher than 200° C, for example tar oil. The mixture is not explosive. Nitroglycerine can be recycled by adding oleic acid which dissolves the tar oil, but not nitroglycerine.

1885. Patent number 9022. Containers for hygroscopic (moisture-sensitive) explosives.

1885. Patent number 9023. Same as 9022 above. Description is missing.

1885. Patent number 9125. Production and use of explosives.

1885. Patent number 14053. Method to decompose rocks by heat.

1886. Patent number 5330. Production of explosives. Tar oil, camphor, etc., may be added to the nitroglycerine to reduce its sensitivity to shocks.

1886. Patent number 5331. Production of explosives. Mixture of nitroglycerine and nitrate, chlorate or perchlorate.

1886. Patent number 15556. Improvement of the explosives and their use, especially in projectiles and torpedoes.

1887. Patent number 371. Regulation of the pressure in cannons.

1887. Patent number 926. Gun with projectile.

1887. Patent number 3674. Methods to counteract the recoil of a rifle.

1887. Patent number 5840. Improvement of explosive projectiles.

1887. Patent number 16919. Improved detonator/detonating composition.

1887. Patent number 16920. Safety explosives of copper ammonium nitrate for coal mines containing coal dust or explosive mine gases.

1888. Patent number 1469. Explosives. Method of producing gunpowder with barium nitrate instead of saltpeter.

1888. Patent number 1470. Improvement in the production of fuzes.

1888. Patent number 1471. Improvement of the production of explosives. Smokeless powder, ballistite.

1888. Patent number 6560. Improved explosive. Nitrocellulose as additives to explosives.

1888. Patent number 10722. Improvement of explosive.

1889. Patent number 568. Improved means to prevent ignition and to retard combustion.

1889. Patent number 1988. Method of preparing explosives for use.

1889. Patent number 4479. Improvement of method to prepare explosives.

1889. Patent number 9361. Improvement of method to prepare explosives.

1889. Patent number 12307. Improvement of method to prepare and use of explosives. Production of rifle cartridge or canon charges of smokeless powder.

1889. Patent number 14678. Improvement of bullet cartridges and weapons for the same.

1890. Patent number 6021. Improvement of the rifle. Ways to prevent overheating of the bore of machine-guns.

1891. Patent number 11212. Improved method to generate compressed gas for motor operation.

1891. Patent number 1891. Improved method to provide effervescence under pressure to obtain motor fuel.

1893. Patent number 11645. Explosive.

1893. Patent number 020234. Artificial rubber.

1893. Patent number 020467. Improving safety fuses for mines and similar purposes.

1894. Patent number 15914. Improvement of the production of artificial rubber, gutta-percha and leather.

1895. Patent number 11346. Improvement of forging of drilled metal subjects.

1895. Patent number 12384. Improvement of gas seal around projectiles.

1895. Patent number 15294. Construction of fuzes for projectiles.

1896. Patent number 6431. Improvement of explosives. Method to lower explosion temperature of explosives.

1896. Patent number 10118. Improved method of making photographic maps or measurements of land.

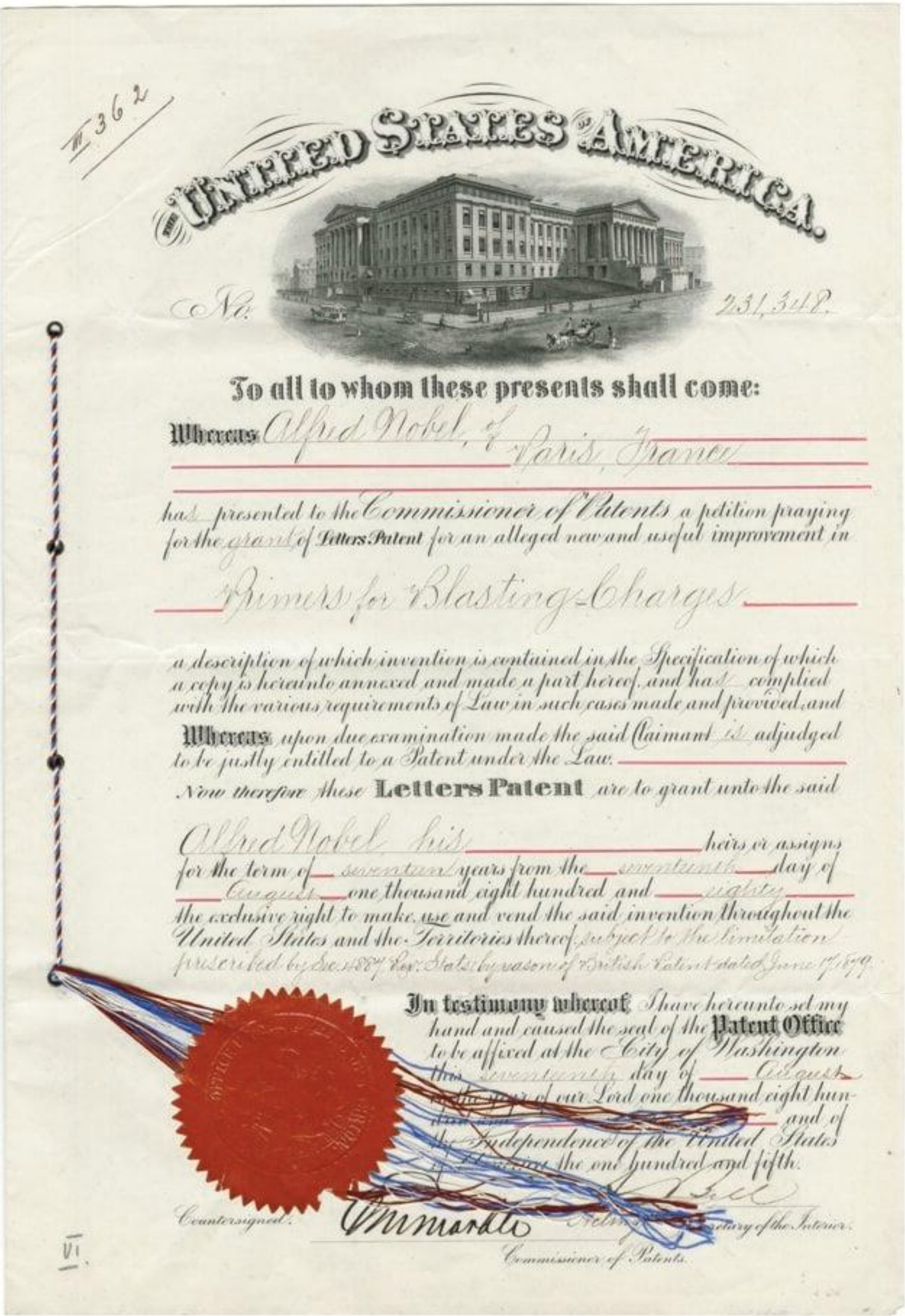
1896. Patent number 14000. Improvement of war rockets, means for maintaining or increasing the initial velocity.

Alfred Nobel, (born Oct. 21, 1833, Stockholm, Swed.—died Dec. 10, 1896, San Remo, Italy), Swedish chemist, engineer, and industrialist. His attempts to find a safe way to handle nitroglycerin resulted in the invention of dynamite and the blasting cap. He built a network of factories to manufacture dynamite and corporations to produce and market his explosives. He went on to develop more powerful explosives and to construct and perfect detonators for explosives that did not explode on simple firing (e.g., when lit with a match).

Nobel registered more than 350 patents, many unrelated to explosives (e.g., artificial silk and leather). A complex personality, both dynamic and reclusive, he was a pacifist but was labeled the “merchant of death” for inventing explosives used in war. Perhaps to counter this label, he left most of his immense fortune, from worldwide explosives and oil interests, to establish the Nobel Prizes, which would become the most highly regarded of all international awards.

Please visit the following web page to know MORE:

https://www.nobelprize.org/alfred-nobel/list-of-alfred-nobels-patents/



III 362

UNITED STATES OF AMERICA.

No. 231,348.

To all to whom these presents shall come:

Whereas Alfred Nobel, of Paris, France

has presented to the Commissioner of Patents a petition praying for the grant of **Letters Patent** for an alleged new and useful improvement in

Primers for Blasting-Charges

a description of which invention is contained in the Specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of Law in such cases made and provided, and

Whereas upon due examination made the said Claimant is adjudged to be justly entitled to a Patent under the Law.

Now therefore these **Letters Patent** are to grant unto the said

Alfred Nobel his heirs or assigns for the term of seventeen years from the seventeenth day of August one thousand eight hundred and eighty the exclusive right to make, use and vend the said invention throughout the United States and the Territories thereof, subject to the limitation prescribed by Sec. 4887 Rev. Stats. by reason of British Patent dated June 17, 1879.

In testimony whereof I have hereunto set my hand and caused the seal of the **Patent Office** to be affixed at the City of Washington this seventeenth day of August in the year of our Lord one thousand eight hundred and [illegible] and of the Independence of the United States of [illegible] the one hundred and fifth.

Secretary of the Interior.

Countersigned.

Commissioner of Patents.

VI.

American Patent Certificate for one of Alfred Nobel's inventions

2023

Nobel Prizes

https://www.nobelprize.org/all-nobel-prizes-2023/

The NOBEL PRIZE IN PHYSICS 2023

“For experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter”

Experiments with light capture the shortest of moments

The three Nobel Prize laureates in Physics 2023 are being recognised for their experiments, which have given humanity new tools for exploring the world of electrons inside atoms and molecules. They have demonstrated a way to create extremely short pulses of light that can be used to measure the rapid processes in which electrons move or change energy.

Pierre Agostini Born: 23 July 1941, Tunis, French protectorate of Tunisia (now Tunisia) Affiliation at the time of the award: The Ohio State University, Columbus, OH, USA Prize share: 1/3	
Ferenc Krausz Born: 17 May 1962, Mór, Hungary Affiliation at the time of the award: Max Planck Institute of Quantum Optics, Garching, Germany; Ludwig-Maximilians-Universität München, Munich, Germany Prize share: 1/3	
Anne L’Huillier Born: 16 August 1958, Paris, France Affiliation at the time of the award: Lund University, Lund, Sweden Prize share: 1/3	

The NOBEL PRIZE IN CHEMISTRY 2023

<table>
<tr><td colspan="2">They added colour to nanotechnology
“For the discovery and synthesis of quantum dots”
Moungi G. Bawendi, Louis E. Brus and Aleksey Yekimov are awarded the Nobel Prize in Chemistry 2023 for the discovery and development of quantum dots. These tiny particles have unique properties and now spread their light from television screens and LED lamps. They catalyse chemical reactions and their clear light can illuminate tumour tissue for a surgeon.</td></tr>
<tr><td>Moungi G. Bawendi
Born: 1961, Paris, France
Affiliation at the time of the award: Massachusetts Institute of Technology (MIT), Cambridge, MA, USA
Prize share: 1/3</td><td> </td></tr>
<tr><td>Louis E. Brus
Born: 1943, Cleveland, OH, USA
Affiliation at the time of the award: Columbia University, New York, NY, USA
Prize share: 1/3</td><td> </td></tr>
<tr><td>Aleksey Yekimov
Born: 1945, Leningrad, USSR (now St. Petersburg, Russia)
Affiliation at the time of the award: Nanocrystals Technology Inc., New York, NY, USA
Prize share: 1/3</td><td> </td></tr>
</table>

The NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE 2023

"For their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19"

Katalin Karikó

Born: 17 January 1955, Szolnok, Hungary

Affiliation at the time of the award: Szeged University, Szeged, Hungary; University of Pennsylvania, Philadelphia, PA, USA

Prize share: 1/2

Drew Weissman

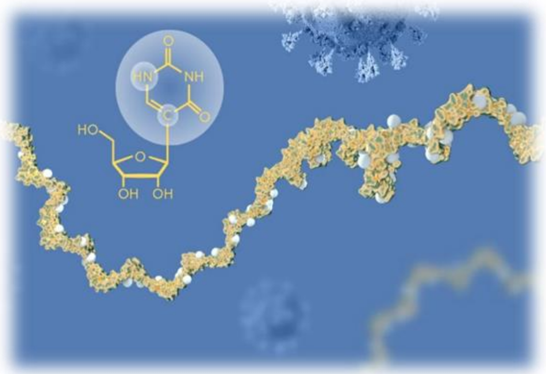
Born: 7 September 1959, Lexington, MA, USA

Affiliation at the time of the award: Penn Institute for RNA Innovations, University of Pennsylvania, Philadelphia, PA, USA

Prize share: 1/2

They contributed to an unprecedented rate of vaccine development

The discoveries by the two Nobel Prize laureates were critical for developing effective mRNA vaccines against COVID-19 during the pandemic that began in early 2020. Through their groundbreaking findings, which have fundamentally changed our understanding of how mRNA interacts with our immune system, the laureates contributed to the unprecedented rate of vaccine development during one of the greatest threats to human health in modern times.



The NOBEL PRIZE IN LITERATURE 2023

Jon Fosse

The Nobel Prize in Literature 2023 is awarded to the Norwegian author Jon Fosse, "for his innovative plays and prose which give voice to the unsayable."

His immense oeuvre written in Norwegian Nynorsk and spanning a variety of genres consists of a wealth of plays, novels, poetry collections, essays, children's books and translations. While he is today one of the most widely performed playwrights in the world, he has also become increasingly recognised for his prose.

The NOBEL PEACE PRIZE 2023

Narges Mohammadi

"For her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all"

"Woman – Life – Freedom"

The Norwegian Nobel Committee has decided to award the Nobel Peace Prize 2023 to Narges Mohammadi for her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all.

This year's peace prize also recognises the hundreds of thousands of people who, in the preceding year, have demonstrated against Iran's theocratic regime's policies of discrimination and oppression targeting women. The motto adopted by the demonstrators – "Woman – Life – Freedom" – suitably expresses the dedication and work of Narges Mohammadi.

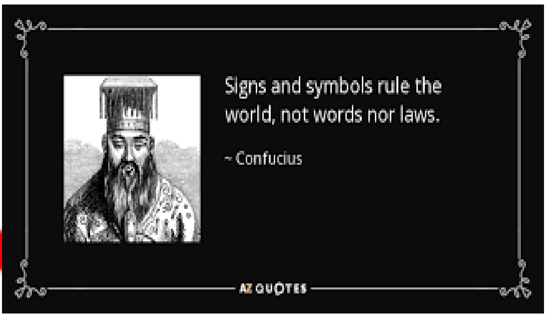
The Sveriges Riksbank Prize in ECONOMIC SCIENCES in Memory of Alfred Nobel 2023

<table>
<tr><td colspan="2">Prize motivation
"For having advanced our understanding of women's labour market outcomes"</td></tr>
<tr><td>Claudia Goldin
Born: 1946, New York, NY, USA
Affiliation at the time of the award: Harvard University, Cambridge, MA, USA
Prize share: 1/1</td><td> </td></tr>
<tr><td>She uncovered key drivers of gender differences in the labour market.
Over the past century, the proportion of women in paid work has tripled in many high-income countries. This is one of the biggest societal and economic changes in the labour market in modern times, but significant gender differences remain. It was first in the 1980s that a researcher adopted a comprehensive approach to explaining the source of these differences. Claudia Goldin's research has given us new and often surprising insights into women's historical and contemporary roles in the labour market.</td><td> </td></tr>
</table>

'Quotes'

of

Alfred Nobel



Signs and symbols rule the world, not words nor laws.

~ Confucius

"If I have a thousand ideas and only one turns out to be good, I am satisfied."

Explanation

Alfred Nobel's quote, "If I have a thousand ideas and only one turns out to be good, I am satisfied," encapsulates a profound perspective on fulfilment and success. In these words, Nobel emphasizes both the value of creativity and the importance of persistence. Acknowledging that not every idea can yield fruitful results, he suggests that even a single brilliant outcome can overshadow any perceived failures. Nobel's satisfaction lies not in the quantity of successful ideas, but rather in the sheer existence of one that surpasses expectations, proving the potential of human imagination and driving him forward in his pursuit of knowledge and progress. This quote serves as an inspiration to all, encouraging us to embrace our ideas, take risks, and appreciate the journey we embark upon in search of innovation and excellence.

"Success is a blend of preparation and opportunity."

Explanation

Alfred Nobel's quote, "Success is a blend of preparation and opportunity," emphasizes the importance of both hard work and favourable circumstances in achieving success. Preparation involves diligently acquiring knowledge, skills, and experiences that contribute to one's goals. It is through thorough preparation that individuals are equipped to seize opportunities when they arise. However, opportunity also plays a crucial role in the path to success. It could be a lucky break, a chance encounter, or being in the right place at the right time. Without opportunity, even the most well-prepared individuals may struggle to achieve their goals. Therefore, Nobel reminds us that true success is the result of a harmonious combination of our readiness and the favourable circumstances that present themselves to us.

"The journey is more important than the destination."

Explanation

Alfred Nobel's quote, "The journey is more important than the destination," highlights the significance of the experiences, growth, and learning that we encounter along the way. While achieving our desired destination is undoubtedly rewarding, it is the process, the challenges we face, and the moments of self-discovery that truly shape us. The journey moulds us into the individuals we become and teaches us valuable lessons that can be applied to future endeavours. This quote reminds us to appreciate the present moment, embrace the obstacles, and recognize the profound impact that the journey has on our personal and professional development.

"The greatest achievements are made by those who dare to dream."

Explanation

Alfred Nobel's quote, "The greatest achievements are made by those who dare to dream," encapsulates the essence of human progress. It highlights the importance of having audacious visions and the courage to pursue them, regardless of the challenges encountered along the way. It is the dreamers, with their unwavering belief in their visions, who push boundaries, challenge the status quo, and bring about transformational change. From scientific discoveries to technological advancements, artistic masterpieces to social reforms, every remarkable achievement in history began with someone daring to dream beyond the ordinary. It is through their indomitable spirit and relentless pursuit of their dreams that the world as we know it evolves and thrives. Nobel's quote serves as a reminder that within each of us lies the potential to make extraordinary contributions, as long as we have the courage to dream big.

"Do not wait for miracles, create them."

Explanation

Alfred Nobel's quote, "Do not wait for miracles, create them," resonates with the power of taking action and shaping one's own destiny. Rather than passively relying on external forces, Nobel encourages us to be proactive in pursuing our goals and ambitions. He emphasizes that miracles are not simply chance occurrences, but rather the result of hard work, determination, and innovation. By inspiring us to become creators, Nobel reminds us that we possess the ability to shape our own realities and make a positive impact in the world. This quote serves as a reminder to embrace our own agency and to actively pursue our dreams, instead of waiting for extraordinary circumstances to bring about the change we desire.

"A person who never made a mistake, never tried anything new."

Explanation

Alfred Nobel's quote, "A person who never made a mistake, never tried anything new," captures the essence of innovation and personal growth. In these few words, Nobel highlights the indispensable role of mistakes in our journey towards progress. By reminding us that mistakes are an inherent part of attempting new things, Nobel emphasizes that one cannot truly grow or achieve success without stepping out of their comfort zone. In daring to take risks and embracing the possibility of failure, individuals pave the way for new discoveries, unconventional solutions, and ground-breaking inventions. Nobel's quote encourages us to embrace experimentation and learn from our failures, as they are vital stepping stones towards success and personal development.

"In order to succeed, your desire for success should be greater than your fear of failure."

Explanation

Alfred Nobel's quote, "In order to succeed, your desire for success should be greater than your fear of failure," captures a powerful message about the mindset required to achieve one's goals. It emphasizes the significance of having an unwavering determination and an unyielding passion for success. Nobel suggests that the fear of failure can often hinder individuals from reaching their full potential. Only when one's desire for success surpasses their fear of failure can they summon the courage to take risks, embrace challenges, and persist in the face of setbacks. Thus, this quote serves as a reminder that true success is not only a product of hard work and talent but also of the ability to conquer self-doubt and embrace failures as stepping stones towards triumph.

"The greatest glory in living lies not in never falling, but in rising every time we fall."

Explanation

Alfred Nobel's quote embodies the essence of resilience and the indomitable spirit of human beings. According to Nobel, the true measure of greatness lies not in never experiencing failure or falling, but in the ability to rise every time we do. It highlights the fact that setbacks and failures are inevitable in life, but what truly matters is how we respond and recover from them. It is through our ability to rise up after falling that we display strength, determination, and a unwavering commitment to pursuing our goals and dreams. Ultimately, this quote reminds us that the pursuit of glory is not about avoiding failure, but about embracing it as an opportunity for growth and self-improvement.

"The true measure of a man is not how he behaves in moments of comfort and convenience, but how he stands at times of controversy and challenges."

Explanation

Alfred Nobel's quote, "The true measure of a man is not how he behaves in moments of comfort and convenience, but how he stands at times of controversy and challenges," speaks to the essence of one's character. It suggests that a person's true nature can only be unveiled when faced with adversity and difficult situations. It implies that anyone can appear virtuous when everything is going their way, but it is during times of controversy and challenges that one's strength and integrity are truly tested. It is in these moments that a person's true colours shine through, as they show their resilience, determination, and ability to stand up for what is right. This quote reminds us that it is during these trying times that a person's true character is truly revealed.

"Your time is limited, so don't waste it living someone else's life."

Explanation

Alfred Nobel's quote serves as a powerful reminder of the importance of individuality and self-determination in one's life journey. Recognizing that our time on this Earth is finite, Nobel urges us not to squander it by conforming to the expectations or desires of others. Instead, he inspires us to embrace our uniqueness and pursue our own passions and aspirations. By following our own path and making conscious choices, we can live a life true to ourselves, fulfilling our own purpose and leaving a lasting impact on the world. Nobel's words remind us to value our time and choose to live authentically, unapologetically embracing our individuality and crafting our own destiny.

"The only way to do great work is to love what you do."

Explanation

Alfred Nobel's quote, "The only way to do great work is to love what you do," encapsulates the essence of passion and dedication necessary for success. By emphasizing the importance of love and enthusiasm towards one's work, Nobel highlights that true greatness can only be achieved when one is fully invested and committed to their craft. When individuals love what they do, their work becomes more than just a job; it becomes an expression of their authentic selves. This love fuels creativity, perseverance, and a relentless pursuit of excellence, leading to remarkable achievements and ground-breaking innovations. Loving what you do ensures that every endeavour is approached with wholehearted engagement, commitment, and a desire to make a positive impact on the world.

"The biggest risk is not taking any risk."

Explanation

Alfred Nobel's quote, "The biggest risk is not taking any risk," encapsulates the essence of embracing challenges and venturing into the unknown. In life, it is natural to fear failure and the consequences it may bring. However, Nobel reminds us that by refusing to take risks, we deny ourselves the opportunity to grow and achieve greatness. Without risk, we may lead stagnant lives, devoid of innovation and personal development. By stepping outside our comfort zones and daring to take chances, we push ourselves to reach new heights, overcome obstacles, and discover our true potential. Ultimately, the biggest risk lies in succumbing to complacency and trudging through a mundane existence, for it is in taking risks that we find fulfilment and leave a lasting impact on the world.

"Your imagination is your preview of life's coming attractions."

Explanation

Alfred Nobel's quote, "Your imagination is your preview of life's coming attractions," beautifully encapsulates the transformative power of our inner world. It suggests that the way we envision our future has a profound impact on its manifestation. Our imagination acts as a preview, offering glimpses of the possibilities that lie ahead. It is through our imaginative faculties that we continuously shape and mould our goals, dreams, and aspirations. By envisioning great things, we harness the creative force within us and set the stage for the realization of our desires. Nobel's quote reminds us of the importance of nurturing our imagination, as it paves the way for a life rich in potential and possibility.

"Learn from yesterday, live for today, hope for tomorrow."

Explanation

Alfred Nobel's quote "Learn from yesterday, live for today, hope for tomorrow" encapsulates the essence of a meaningful and fulfilling life. Reflecting on the past allows us to glean valuable lessons, teaching us what worked and what didn't. By recognizing our past mistakes and successes, we acquire knowledge and wisdom that we can apply to our present circumstances. Living in the present moment is crucial as it enables us to fully embrace the joy and beauty of life. It urges us to cherish every experience, appreciate the people around us, and make the most of each opportunity. However, it is equally important to maintain hope for tomorrow. Hope imparts a sense of optimism and fuels our aspirations, spurring us to work towards a brighter future. By learning, living, and hoping, we embark on a transformative journey towards personal growth, fulfilment, and a life well-lived.

"Don't be afraid to give up the good to go for the great."

Explanation

The quote by Alfred Nobel, "Don't be afraid to give up the good to go for the great," embodies the philosophy of aspiring for excellence and embracing change. It reminds us that settling for mediocrity should not be an option when pursuing our dreams and goals. Sometimes, we may find ourselves comfortable in a situation or accomplished in a certain role, but it takes courage and determination to step out of our comfort zones and strive for something greater. This quote encourages us to let go of what is merely good, familiar, or easy, and instead, reach for the extraordinary. It encourages us to push our boundaries, take risks, and continuously challenge ourselves, offering us the possibility of achieving greatness in all aspects of our lives.

"Without passion, you don't have energy. Without energy, you have nothing."

Explanation

Alfred Nobel, the renowned inventor and philanthropist, succinctly captures the essence of human motivation and drive in his profound quote: "Without passion, you don't have energy. Without energy, you have nothing." This thought-provoking statement underscores the vital connection between passion and energy, highlighting the intrinsic link between pursuing one's passions and achieving success. Passion acts as a driving force, igniting a vibrant energy within an individual, and propelling them forward in their endeavours. Without this passionate energy, life becomes dull and mundane, devoid of the enthusiasm and determination needed to overcome obstacles and achieve greatness. Nobel's quote serves as a reminder to embrace and pursue our passions fervently, ensuring we maintain the energy required to make meaningful contributions in our lives.

"The future belongs to those who believe in the beauty of their dreams."

Explanation

Alfred Nobel's quote, "The future belongs to those who believe in the beauty of their dreams," amplifies the importance of having faith and aspirations in shaping one's destiny. By emphasizing the belief in the allure of dreams, Nobel recognizes that envisioning a better future is not only essential but transformative. It inspires individuals to take action, persevere in the face of difficulties, and ultimately make their dreams a reality. Nobel acknowledges that those who dare to dream big have the power to create a future filled with innovation, progress, and beauty. This quote serves as a powerful reminder that hope and determination are fundamental in shaping a brighter and more fulfilling tomorrow.

"Live as if you were to die tomorrow. Learn as if you were to live forever."

Explanation

Alfred Nobel's quote "Live as if you were to die tomorrow. Learn as if you were to live forever" encapsulates the essence of living a purposeful and meaningful life. It urges individuals to seize the present moment and make the most of their existence, as if there were no future. It emphasizes the importance of embracing every day with gratitude, pursuing passions and dreams, and cherishing the relationships that enrich our lives. Simultaneously, Nobel advocates for a continuous thirst for knowledge and growth, acknowledging that the quest for learning should never cease. By seeking knowledge and expanding our horizons, we cultivate a deeper understanding of the world around us and unlock our full potential, allowing us to make a lasting impact. Ultimately, this quote reminds us to live each day to the fullest while always embracing the opportunity to learn and grow, empowering us to leave a meaningful legacy behind.

"Take the first step in faith. You don't have to see the whole staircase, just take the first step."

Explanation

Alfred Nobel's quote encourages individuals to venture into the unknown with faith and determination. It emphasizes that sometimes, trying to visualize the entire path to success before starting can be overwhelming and discouraging. Instead, Nobel advises taking that crucial first step in faith, embracing uncertainty and trusting in one's abilities and instincts. By focusing on the immediate task at hand rather than the entire journey, one can bypass fear and doubt, creating momentum and propelling themselves forward. Nobel's words serve as a reminder that beginnings are often filled with ambiguity, but it is by taking that initial leap of faith that one can pave the way for future accomplishments.

"Believe you can and you're halfway there."

Explanation

Alfred Nobel once said, "Believe you can and you're halfway there." These words encapsulate the power and significance of self-belief in achieving success. Nobel emphasizes that having faith in oneself lays the foundation for accomplishment and progress. By trusting in our abilities, skills, and potential, we overcome the barriers and doubts that often hinder our journey. This quote serves as a reminder that self-confidence is the key to unlocking our true potential and propelling us towards our goals. It reassures us that the mere act of believing in ourselves already sets us on a path to achievement, as it fuels our determination and perseverance. Ultimately, Nobel's message inspires us to cultivate a strong belief in ourselves, providing us with the confidence needed to conquer obstacles and attain our aspirations.

"Success is not final; failure is not fatal: It is the courage to continue that counts."

Explanation

Alfred Nobel's quote encapsulates the essence of perseverance and resilience in the face of adversity. He reminds us that success should not be perceived as a destination, but rather as a continuous journey. It is essential to understand that failure, no matter how devastating or disheartening, should not define one's potential for future success. Instead, it is the ability to gather the strength and courage to continue that truly matters. By possessing the determination to learn from mistakes, adapt, and persist, individuals can overcome setbacks and pave their path towards eventual triumph. Nobel's quote serves as a timeless reminder to embrace challenges with unwavering determination, as it is the unwavering spirit to carry on that ultimately counts.

"The best way to predict the future is to create it."

Explanation

Alfred Nobel's quote, "The best way to predict the future is to create it," encapsulates the profound belief in human agency and the power of innovation. Nobel, the inventor of dynamite and founder of the Nobel Prizes, understood that the world is not a static entity but rather a result of our collective actions. He recognized that by actively shaping the present, we have the ability to shape a better future. This quote serves as a call to action, urging individuals and society as a whole to take responsibility, think creatively, and actively engage in shaping the world we desire. It reminds us that we are not passive spectators waiting for fate to unfold, but architects of our own destiny. Through innovation, perseverance, and a willingness to challenge conventions, we can truly create a future that exceeds our wildest expectations.

"If there is no struggle, there is no progress."

Explanation

Alfred Nobel's quote, "If there is no struggle, there is no progress," speaks to the inherent connection between hardship and growth. In this concise statement, Nobel encapsulates the idea that without encountering challenges and overcoming them, true progress cannot be achieved. His words remind us that struggle is not something to be avoided or shied away from, but rather an essential catalyst for personal and collective development. Whether it be on an individual level or within societies, it is through adversities and trials that we gain valuable lessons, resilience, and the opportunity to exceed our own limitations. Noble's remark serves as a powerful reminder that progress can only arise from conquering obstacles and pushes us to embrace the struggles we face as stepping stones towards our desired outcomes.

"Success is not the key to happiness. Happiness is the key to success."

Explanation

In his famous quote, Alfred Nobel provides valuable insight into the relationship between success and happiness. He suggests that contrary to popular belief, success in itself does not unlock genuine happiness. Instead, it is the presence of inner happiness that enables individuals to achieve true success. Nobel's words remind us that success without happiness can lead to emptiness and a sense of dissatisfaction, as it is happiness that provides the motivation, contentment, and fulfilment needed to reach our goals and find lasting success. By prioritizing our happiness, we pave the way for a more authentic and fulfilling journey towards achieving our aspirations

"I have not failed. I've just found 10,000 ways that won't work."

Explanation

Alfred Nobel's quote, "I have not failed. I've just found 10,000 ways that won't work," encapsulates the mindset of a true innovator and someone who never gives up. Nobel, known for his invention of dynamite, understood that failure was simply a stepping stone towards success. Rather than viewing failure as a setback, he saw it as an opportunity to learn and grow. This quote perfectly demonstrates Nobel's resilience and determination to find solutions, even after countless unsuccessful attempts. It serves as a reminder to embrace failure as a crucial part of the learning process and to constantly strive for improvement in the pursuit of success.

“The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack in will.”

Explanation

Alfred Nobel's quote emphasizes the crucial role of willpower and determination in achieving success. He believes that true success does not solely depend on one's physical strength or knowledge, but rather on the strength of one's will. In other words, individuals who possess unwavering determination and the resilience to overcome obstacles are more likely to thrive in their pursuits. This quote reminds us that challenges are a natural part of life, and it is our will that defines whether we emerge victorious or succumb to defeat. It is the will that enables us to persevere, push boundaries, and harness our full potential, revealing that the true difference between successful individuals and others lies in the power of their will.

“You are never too old to set another goal or to dream a new dream.”

Explanation

Alfred Nobel's quote, "You are never too old to set another goal or to dream a new dream," encapsulates the timeless essence of human potential and the endless possibilities that life offers. Regardless of one's age or stage in life, this quote serves as a reminder that it's never too late to redefine oneself, embrace change, and seek out new aspirations. It encourages individuals, no matter how advanced in years they may be, to shed limiting beliefs and fears, and instead, tap into their inner reservoir of creativity and ambition. By highlighting the remarkable capacity for growth and transformation, Nobel's quote inspires people to continue pushing their boundaries and strive for personal fulfilment, proving that age is merely a number when it comes to pursuing dreams.

“Follow your passion, and success will follow you.”

Explanation

Alfred Nobel, with his wise words, highlights the key to achieving true success in life. According to him, the path to success lies in following one's passion. By pursuing our passions, we become wholeheartedly engaged in our endeavours, igniting a fire within us that propels us forward. Whether it is a love for the arts, a fascination for science, or a desire to make a difference in the world, when we choose to follow our passions, we unlock our full potential and unleash our creativity. Success, in turn, becomes an inevitable consequence of our dedication and unwavering commitment. By staying true to ourselves and pursuing what genuinely inspires us, we attract opportunities, connections, and the necessary resources to fulfil our dreams. Success, therefore, no longer becomes a chasing game but an outcome that naturally manifests in our lives.

“Courage is not the absence of fear, but the triumph over it.”

Explanation

In his words, Alfred Nobel brilliantly captures the essence of courage—an essential quality that defines extraordinary individuals. He states that courage is not merely the absence of fear but rather the triumph over it. Nobel emphasizes that the true measure of courage lies not in the absence of fear, but in one's ability to confront and overcome it. To be courageous means to push past the limits fear imposes and to face adversities with unwavering determination. This quote inspires us to embrace our fears and transform them into opportunities for growth and self-discovery. It reminds us that courage is not about being fearless, but about harnessing our inner strength to conquer whatever obstacles lie in our path.

“The best revenge is massive success.”

Explanation

Alfred Nobel once wisely stated, "The best revenge is massive success." In these few words, he encapsulated the essence of resilience and triumph in the face of adversity. Instead of harbouring feelings of anger, bitterness, or resentment towards those who may have wronged us, Nobel suggests that channelling our energy into achieving great accomplishments serves as the ultimate form of revenge. By focusing on personal growth, accomplishing our goals, and living a life filled with purpose and success, we not only prove our detractors wrong, but we also find true fulfilment and satisfaction within ourselves. Nobel's words inspire us to rise above negativity and use any negativity we encounter as fuel to propel ourselves towards greater heights, where success ultimately becomes the most powerful form of vindication.

Note:

It appears that some of these quotes are from some other intellectuals too; of course, great mind thinks alike.

Please visit the following web links to know more about Alfred Nobel's QUOTES

https://www.bookey.app/quote-author/alfred-nobel

https://www.brainyquote.com/authors/alfred-nobel-quotes

https://www.jagranjosh.com/general-knowledge/alfred-nobel-quotes-1702207224-1

https://in.pinterest.com/minimalistquotesimages/alfred-nobel-quotes/

https://todayinsci.com/N/Nobel_Alfred/NobelAlfred-Quotations.htm

RELATED QUOTES

Another TEN "30 Quotes"

30 Best Procrastination Quotes With Image
30 Best The Four Agreements Quotes With Image
30 Best one hundred years of solitude Quotes With Image
30 Best Emily Deschanel Quotes With Image
30 Best Henry Cloud Quotes With Image
30 Best Ethel Kennedy Quotes With Image
30 Best an American tragedy Quotes With Image
30 Best The Seven Crystal Balls Quotes With Image
30 Best Richard Lloyd Parry Quotes With Image
30 Best The Song Rising Quotes With Image

TimeLINE

Alfred Nobel

Year	Events
1833	Alfred Nobel is given birth in Stockholm [21 October]. His father, Immanuel Nobel, goes bankrupt.
1837	Alfred's father leaves to start a mechanical workshop in St. Petersburg Virginia
1842	Alfred and his family are reunited in St.Petersburg
1850-52	▪ Alfred Nobel travels to Paris and works a year in the laboratory of T. Jules Pelouze ▪ He also goes to Italy, Germany and the United States
1956-62	Alfred's teacher, Nikolai N. Zinin, reminds him of Nitroglycerine; he then begins to experiment with N-Gly
1863	▪ Nobel is awarded the first patent on nitroglycerin-blasting oil, as an industrial explosive ▪ He produces and patents a detonator, blasting cap, for triggering the explosion of the blasting liquid ▪ He also moves back to Stockholm, where he then continues on his experiments
1864	Alfred's brother, Emil, is killed during the prep for N-Gly
1865-67	▪ Alfred improves the detonator design and travels to Germany to create the Alfred Nobel and Co Factory in Krümmel ▪ Nobel establishes the United States Blasting Oil Company in the US ▪ A violent explosion destroys the Krümmel plant near Hamburg ▪ He finds that nitroglycerin is controlled better by the addition of kieselguhr, also known as

	diatomaceous earth, and calls this mixture dynamite. ▪ He then gains the patent of dynamite
1871-72	▪ Nobel creates the British Dynamite Company in Ardeer, Scotland and UK. ▪ Immanuel passes away
1873	▪ Nobel became a wealthy guy at the age of forty ▪ He moves to Paris where he settles at Avenue Malakoff
1877	▪ The company name is changed to Nobel's Explosives Company
1875-76	▪ Alfred Nobel creates blasting gelatine in Paris, he also patents it in 1876 ▪ Dynamitaktiengesellschaft-DAG- formerly Alfred Nobel and Co (Hamburg, Germany), is formed
1880	"Dynamite Nobel" is produced by merging Nobel's Italian and Swiss companies
1881-87	▪ Nobel bought an estate and laboratory at Sevran on the perimeter of Paris ▪ German Union is made by joining DAG and a group of German dynamite companies ▪ Nobel-Dynamite Trust Co, which is in London, UK, is then joined by merging DAG and the Nobel's Explosives Company Nobel obtains a patent for the blasting powder "ballistite" in France
1889	Alfred's mom, Adriette, passes away
1891-94	Alfred Nobel moves from Paris to San Remo, Italy, after an altercation with the French government over ballistite Alfred hired Ragnar Sohlman, who he later labelled the executor of his will and testament
1895-96	Nobel signed his third and final will at the Swedish-Norwegian Club in Paris Alfred Nobel passed away at his home in San Remo, Italy, on 10 Dec 1896

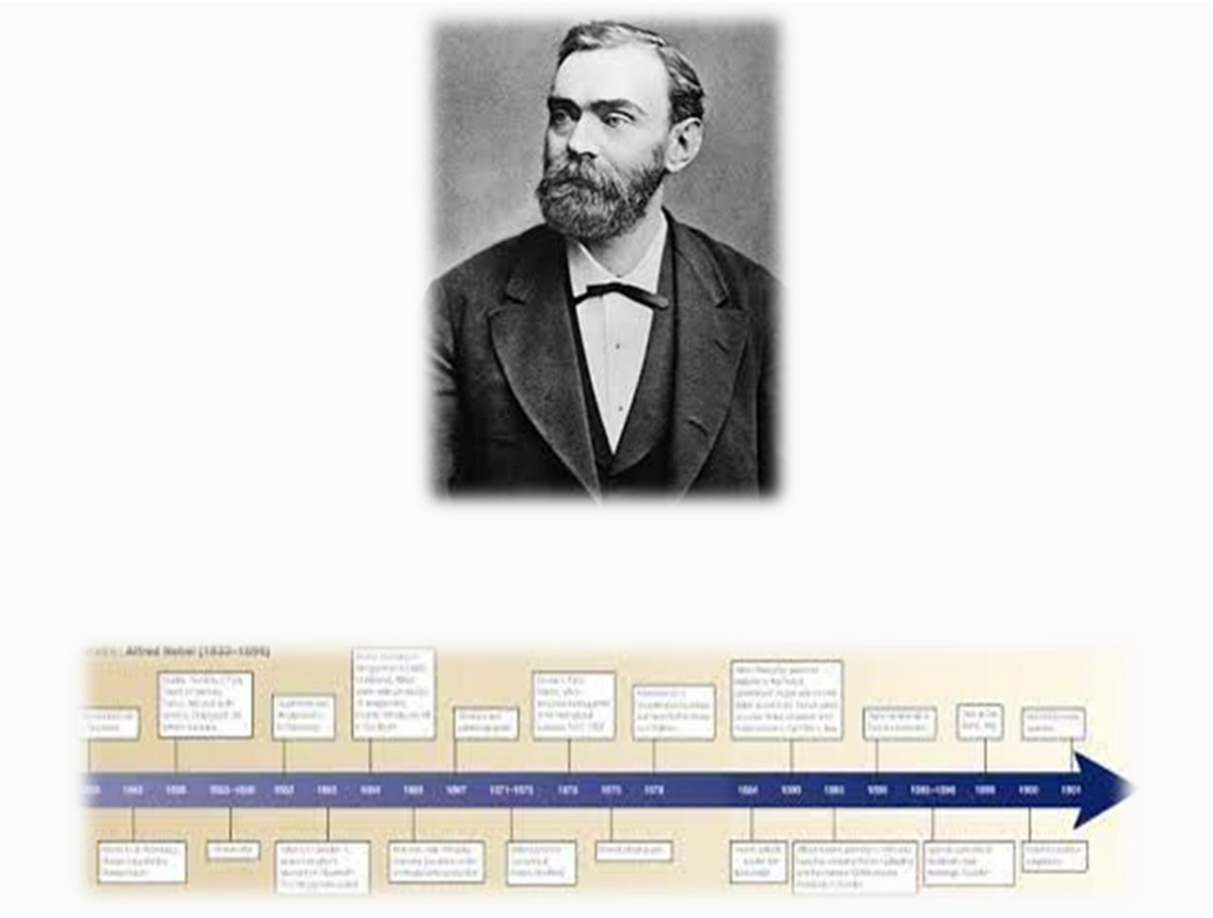
Please visit the following web pages to KNOW about him:

01] https://www.timetoast.com/timelines/alfred-nobel-85a70976-8ec5-4da5-9a9b-506306d119fe

02] https://prezi.com/xrlb7ohb9rnj/alfred-nobels-timeline/

03] https://prezi.com/5kosfi82afkk/alfred-nobel-timeline/

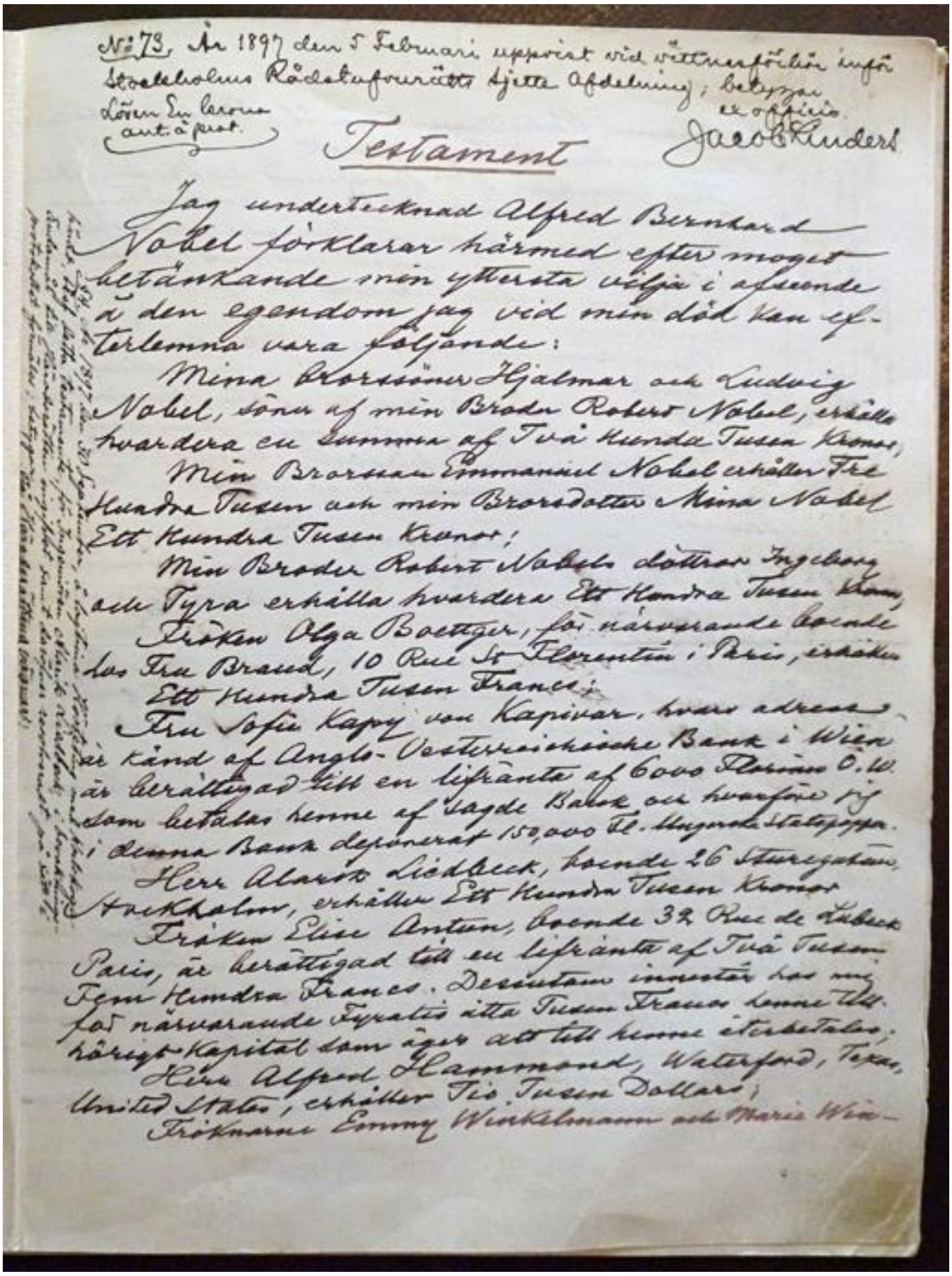
04] https://time.graphics/event/4940069



WILL

of

Alfred Nobel



N:o 73. År 1897 den 5 Februari uppvisat vid vittnesförhör inför Stockholms Rådstufvurätts Sjette Afdelning; betygar ex officio
Lösen En krona ant. å prot.
Jacob Lundert

Testament

Jag undertecknad Alfred Bernhard Nobel förklarar härmed efter moget betänkande min yttersta vilja i afseende å den egendom jag vid min död kan efterlemna vara följande:

Mina brorssöner Hjalmar och Ludvig Nobel, söner af min Broder Robert Nobel, erhålla hvardera en summa af Två hundra Tusen Kronor;

Min Brorson Emmanuel Nobel erhåller Tre Hundra Tusen och min Brorsdotter Mina Nobel Ett Hundra Tusen Kronor;

Min Broder Robert Nobels döttrar Ingeborg och Tyra erhålla hvardera Ett Hundra Tusen Kronor;

Fröken Olga Boettger, för närvarande boende hos Fru Brand, 10 Rue St Florentin i Paris, erhåller Ett Hundra Tusen Francs;

Fru Sofie Kapy von Kapivar, hvars adress är känd af Anglo-Oesterreichische Bank i Wien, är berättigad till en lifränta af 6000 Florins Ö.W. som betalas henne af sagde Bank och hvarföre jag i denna Bank deponerat 150,000 Fl. Ungerska Statspapper.

Herr Alarik Liedbeck, boende 26 Sturegatan, Stockholm, erhåller Ett Hundra Tusen Kronor;

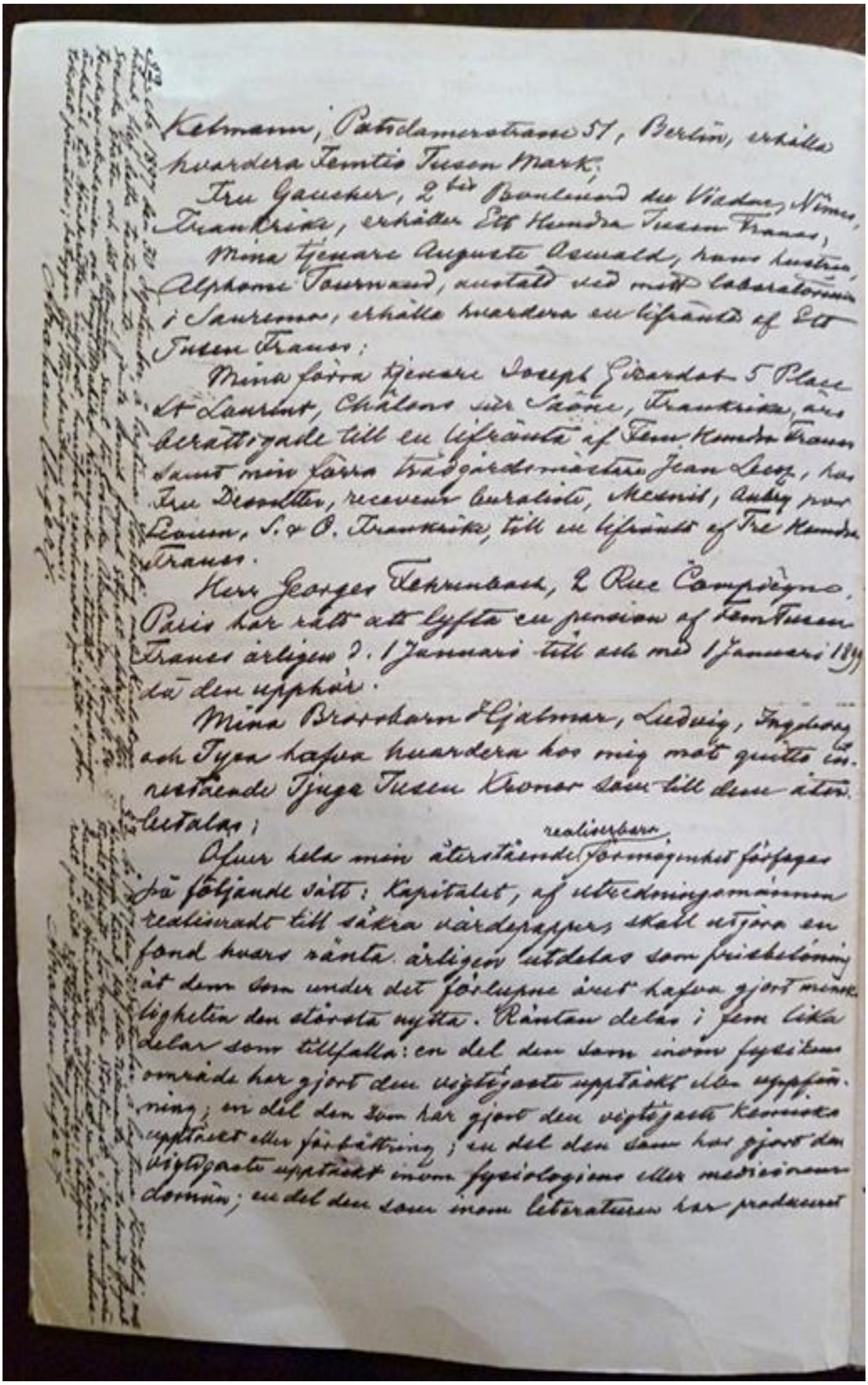
Fröken Elise Antun, boende 32 Rue de Lubeck, Paris, är berättigad till en lifränta af Två Tusen Fem Hundra Francs. Dessutom innestår hos mig för närvarande Fyratio åtta Tusen Francs henne tillhörigt Kapital som äges att till henne återbetalas;

Herr Alfred Hammond, Waterford, Texas, United States, erhåller Tio Tusen Dollars;

Fröknarne Emmy Winkelmann och Marie Win-

N:o 54. År 1897 den 30 September, å lagtima Höstting med [illegible] härad, blef detta testamente, för Ingeniören Alarik Liedbeck, i bevakningsändamål till Häradsrätten ingifvet samt däröfver resolverat på sätt protokollet förmäler; betygar å Häradsrättens vägnar:

Page one of Alfred Bernhard Nobel's will.



Kellmann, Potsdamerstrasse 51, Berlin, erhålla hvardera Femtio Tusen Mark;

Fru Gaucher, 2 bis Boulevard du Viaduc, Nimes, Frankrike, erhåller Ett Hundra Tusen Francs;

Mina tjenare Auguste Oswald, hans hustru, Alphonse Tournand, anstäld vid mitt laboratorium i Sanremo, erhålla hvardera en lifränta af Ett Tusen Francs;

Min förra tjenare Joseph Girardot 5 Place St Laurent, Châlons sur Saône, Frankrike, är berättigade till en lifränta af Fem Hundra Francs samt min förra trädgårdsmästare Jean Lecof, hos Fru Desoutter, receveur buraliste, Mesnil, Aubry pour Ecouen, S. & O. Frankrike, till en lifränta af Tre Hundra Francs.

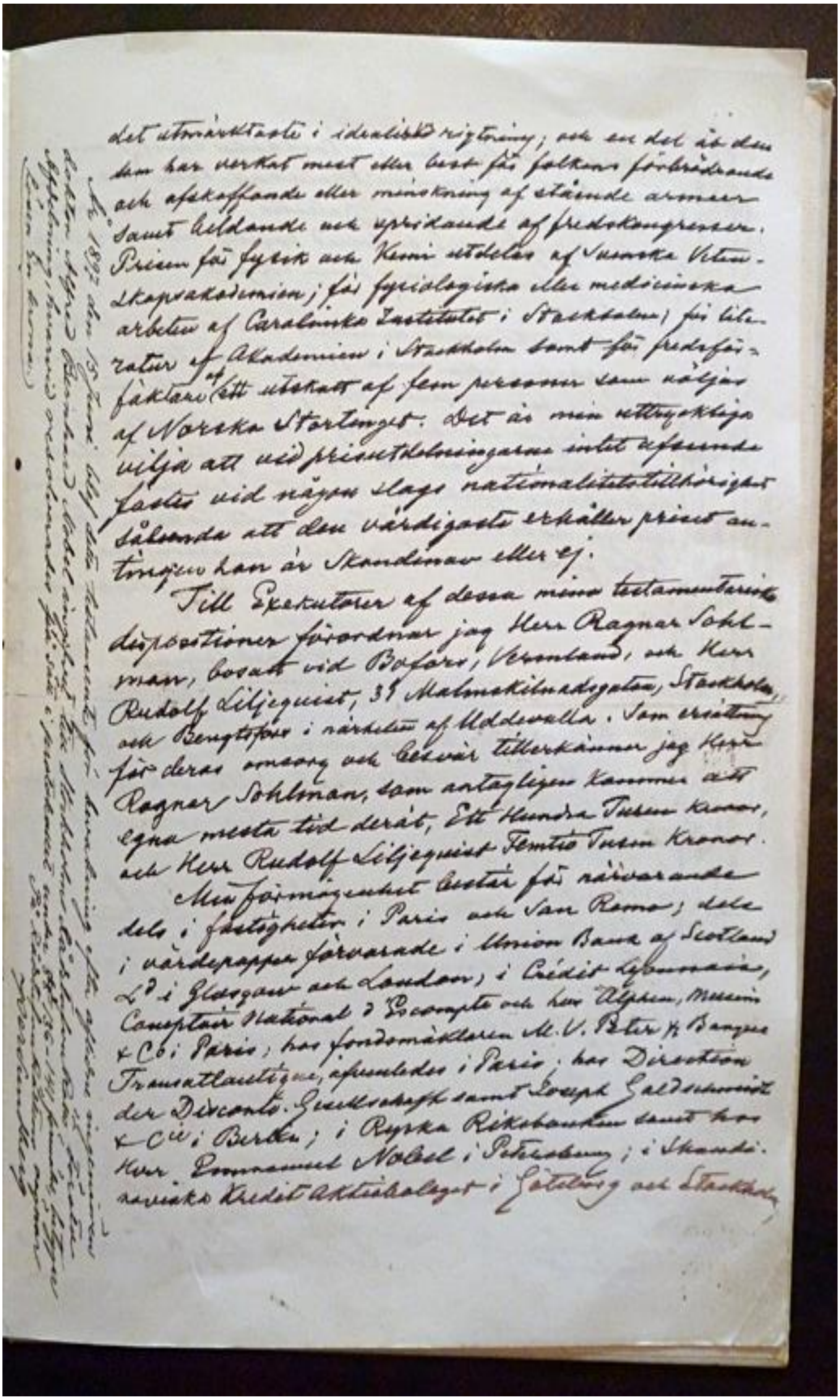
Herr Georges Fehrenbach, 2 Rue Compiègne, Paris har rätt att lyfta en pension af Fem Tusen Francs årligen f. 1 Januari till och med 1 Januari 189 då den upphör.

Mina Brorsbarn Hjalmar, Ludvig, Ingeborg och Tyra hafva hvardera hos mig mot qvitto innestående Tjugo Tusen Kronor som till dem återbetalas;

Öfver hela min återstående realiserbara förmögenhet förfogas på följande sätt: Kapitalet, af utredningsmännen realiseradt till säkra värdepapper skall utgöra en fond hvars ränta årligen utdelas som prisbelöning åt dem som under det förlupne året hafva gjort menskligheten den största nytta. Räntan delas i fem lika delar som tillfalla: en del den som inom fysikens område har gjort den vigtigaste upptäckt eller uppfinning; en del den som har gjort den vigtigaste kemiska upptäckt eller förbättring; en del den som har gjort den vigtigaste upptäckt inom fysiologiens eller medicinens domän; en del den som inom literaturen har produceradt

Page two of Alfred Bernhard Nobel's will

]



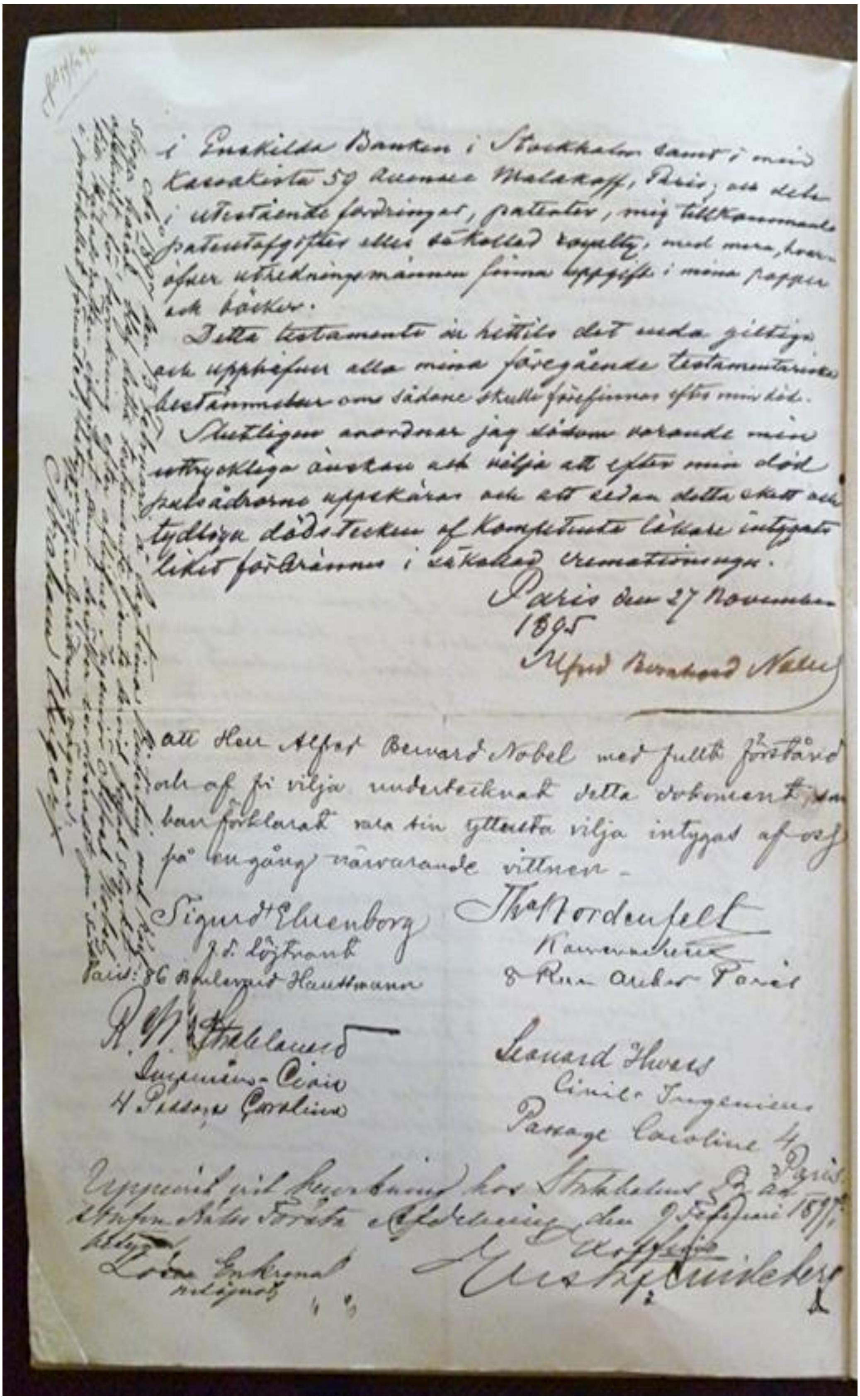
det utomordentligaste i idealisk rigtning; och en del åt den som har verkat mest eller bäst för folkens förbrödrande och afskaffande eller minskning af stående armeer samt bildande och spridande af fredskongresser. Prisen för fysik och Kemi utdelas af Svenska Vetenskapsakademien; för fysiologiska eller medicinska arbeten af Carolinska Institutet i Stockholm; för literatur af Akademien i Stockholm samt för fredsförfäktare af ett utskott af fem personer som väljas af Norska Stortinget. Det är min uttryckliga vilja att vid prisutdelningarne intet afseende fästes vid någon slags nationalitetstillhörighet sålunda att den värdigaste erhåller priset antingen han är Skandinav eller ej.

Till Exekutorer af dessa mina testamentariska dispositioner förordnar jag Herr Ragnar Sohlman, bosatt vid Bofors, Vermland, och Herr Rudolf Liljequist, 31 Malmskilnadsgatan, Stockholm och Bengtsfors i närheten af Uddevalla. Som ersättning för deras omsorg och besvär tillerkänner jag Herr Ragnar Sohlman, som antagligen kommer att egna mesta tid deråt, Ett Hundra Tusen Kronor, och Herr Rudolf Liljequist Femtio Tusen Kronor.

Min förmögenhet består för närvarande dels i fastigheter i Paris och San Remo; dels i värdepapper förvarade i Union Bank of Scotland Ld i Glasgow och London; i Crédit Lyonnais, Comptoir National d'Escompte och hos Alphen, Messin & Co i Paris; hos fondsmäklaren M.V. Peter & Banque Transatlantique, äfvenledes i Paris; hos Direction der Disconto-Gesellschaft samt Joseph Goldschmidt & Cie i Berlin; i Ryska Riksbanken samt hos Herr Emmanuel Nobel i Petersburg; i Skandinaviska Kredit Aktiebolaget i Göteborg och Stockholm

År 1897 den 15 Juni blef detta testamente för bevakning efter aflidne ingeniören doktor Alfred Bernhard Nobel ingifvet till Stockholms Rådstufvurätts 1a Första Afdelning, hvarvid resolverades för sitt i protokollet under §§ 136–141 [illegible]; lösen en krona.
På Rådstufvurättens vägnar

Page three of Alfred Bernhard Nobel's will



i Enskilda Banken i Stockholm samt i min Kassakista 59 Avenue Malakoff, Paris; äfvensom utestående fordringar, patenter, mig tillkommande patentafgifter eller så kalladt royalty, med mera, hvarom utredningsmännen finna uppgift i mina papper och böcker.

Detta testamente är hittils det enda giltiga och upphäfver alla mina föregående testamentariska bestämmelser om sådane skulle förefinnas efter min död.

Slutligen anordnar jag såsom varande min uttryckliga önskan och vilja att efter min död pulsådrorna uppskäras och att sedan detta skett och tydliga dödstecken af kompetenta läkare intygats liket förbrännes i så kalladt crematorium.

Paris den 27 November 1895

Alfred Bernhard Nobel

Att Herr Alfred Bernhard Nobel med fullt förstånd och af fri vilja undertecknat detta dokument som han förklarat vara sin yttersta vilja intygas af oss på en gång närvarande vittnen -

Sigurd Ehrenborg
f.d. Löjtnant
Paris: 84 Boulevard Haussmann

Thos Nordenfelt
Konstruktör
8 Rue Auber Paris

R. W. Strehlenert
Ingenieur-Civil
4 Passage Caroline

Leonard Hwass
Civil-Ingenieur
Passage Caroline 4 Paris

Uppvisad vid bouppteckning hos Stockholms Rådstufvurätts första Afdelning den 9 Februari 1897.

Page four of Alfred Bernhard Nobel's will

The following is the relevant portion of Alfred Bernhard Nobel's will establishing the Nobel Prizes:

The whole of my remaining realizable estate shall be dealt with in the following way:

The capital shall be invested by my executors in safe securities and shall constitute a fund, the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind. The said interest shall be divided into five equal parts, which shall be apportioned as follows: one part to the person who shall have made the most important discovery or invention within the field of physics; one part to the person who shall have made the most important chemical discovery or improvement; one part to the person who shall have made the most important discovery within the domain of physiology or medicine; one part to the person who shall have produced in the field of literature the most outstanding work of an idealistic tendency; and one part to the person who shall have done the most or best work for fraternity among nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses.

The prizes for physics and chemistry shall be awarded by the Swedish Academy of Sciences; that for physiology or medical works by the Karolinska Institute in Stockholm; that for literature by the Academy in Stockholm; and that for champions of peace by a committee of five persons to be elected by the Norwegian Storting. It is my express wish that in awarding the prizes no consideration whatever shall be given to the nationality of the candidates, so that the most worthy shall receive the prize, whether he be a Scandinavian or not.

Full text of Alfred Nobel's will

I, the undersigned, Alfred Bernhard Nobel, after mature deliberation, hereby declare the following to be my last will and testament with regard to such property as I may leave upon my death:

My nephews, Hjalmar and Ludvig Nobel, sons of my brother Robert Nobel, will each receive the sum of two hundred thousand crowns;

My nephew Emmanuel Nobel will receive the sum of three hundred thousand, and my niece Mina Nobel one hundred thousand crowns;

My brother Robert Nobel's daughters, Ingeborg and Tyra, will each receive the sum of one hundred thousand crowns;

Miss Olga Boettger, presently residing with Mrs Brand, 10 Rue St Florentin in Paris, will receive one hundred thousand francs;

Mrs Sofie Kapy von Kapivar, whose address is known to the Anglo-Oesterreichische Bank in Vienna, is entitled to an annuity of 6000 florins Ö.W. which will be paid to her by the aforementioned bank, and to this end I have deposited in this bank the amount of 150 000 florins in Hungarian sovereign bonds.

Mr Alarik Liedbeck, residing at 26 Sturegatan, Stockholm, will receive one hundred thousand crowns;

Miss Elise Antun, residing at 32 Rue de Lubeck, Paris, is entitled to an annuity of two thousand five hundred francs. In addition, she is entitled to be repaid forty-eight thousand francs of capital that belongs to her and is currently deposited with me;

Mr Alfred Hammond, of Waterford, Texas, United States, will receive ten thousand dollars;

Miss Emmy Winkelmann and Miss Marie Winkelmann, of Potsdamerstrasse 51, Berlin, will each receive fifty thousand marks;

Mrs Gaucher, of 2 bis Boulevard du Viaduc, Nimes, France will receive one hundred thousand francs;

My servants, Auguste Oswald and his wife Alphonse Tournand, employed at my laboratory at San Remo, will each receive an annuity of one thousand francs;

My former servant, Joseph Girardot, of 5 Place St. Laurent, Châlons sur Saône, France, is entitled to an annuity of five hundred francs, and my former gardener, Jean Lecof, residing with Mrs Desoutter, receveur buraliste, Mesnil, Aubry pour Ecouen, S.& O., France, will receive an annuity of three hundred francs.

Mr Georges Fehrenbach, of 2 Rue Compiègne, Paris, is entitled to collect an annual pension of five thousand francs from 1 January [1896] to 1 January 1899, when it will cease.

My brother's children – Hjalmar, Ludvig, Ingeborg and Tyra – each have a sum of twenty thousand crowns, deposited with me against acknowledgement of receipt, which will be repaid to them;

All of my remaining realisable assets are to be disbursed as follows: the capital, converted to safe securities by my executors, is to constitute a fund, the interest on which is to be distributed annually as prizes to those who, during the preceding year, have conferred the greatest benefit to humankind. The interest is to be divided into five equal parts and distributed as follows: one part to the person who made the most important discovery or invention in the field of physics; one part to the person who made the most important chemical discovery or improvement; one part to the person who made the most important discovery within the domain of physiology or medicine; one part to the person who, in the field of literature, produced the most outstanding work in an idealistic direction; and one part to the person who has done the most or best to advance fellowship among nations, the abolition or reduction of standing armies, and the establishment and promotion of peace congresses. The prizes for physics and chemistry are to be awarded by the Swedish Academy of Sciences; that for physiological or medical achievements by the Karolinska Institute in Stockholm; that for literature by the Academy in Stockholm; and that for champions of peace by a committee of five persons to be selected by the Norwegian Storting. It is my express wish that when awarding the prizes, no consideration be given to nationality, but that the prize be awarded to the worthiest person, whether or not they are Scandinavian.

As executors of my testamentary dispositions, I appoint Mr Ragnar Sohlman, resident in Bofors, Värmland, and Mr Rudolf Liljequist, of 31 Malmskillnadsgatan, Stockholm, and Bengtsfors, close to Uddevalla. As compensation for their attention and efforts, I grant to Mr Ragnar Sohlman, who will probably devote most time to this matter, one hundred thousand crowns, and to Mr Rudolf Liljequist, fifty thousand crowns;

My assets currently consist partly of real estate in Paris and San Remo, and partly of securities deposited with the Union Bank of Scotland Ltd in Glasgow and London, with Crédit Lyonnais, Comptoir National d'Escompte, and with Alphen, Messin & Co. in Paris; with stockbroker M.V. Peter of Banque Transatlantique, also in Paris; with the Direction der Disconto Gesellschaft and with Joseph Goldschmidt & Cie in Berlin; with the Russian Central Bank, and with Mr Emmanuel Nobel in Petersburg; with Skandinaviska Kreditaktiebolaget in Gothenburg and Stockholm, with Enskilda Banken in Stockholm and in my strong box at 59 Avenue Malakoff, Paris; as well as of accounts receivable, patents, patent fees or royalties due to me, etc. about which my executors will find information in my papers and books.

As of now, this will and testament is the only one that is valid, and revokes all my previous testamentary dispositions, should any such be found after my death.

Finally, it is my express wish that following my death, my arteries be severed, and when this has been done and competent doctors have confirmed clear signs of death, my remains be incinerated in a crematorium.

Paris, 27 November, 1895

Alfred Bernhard Nobel

We, the undersigned witnesses, attest that Mr Alfred Bernhard Nobel, being of sound mind and of his own free will, signed this document, which he declared in the presence of us all to be his last will and testament:

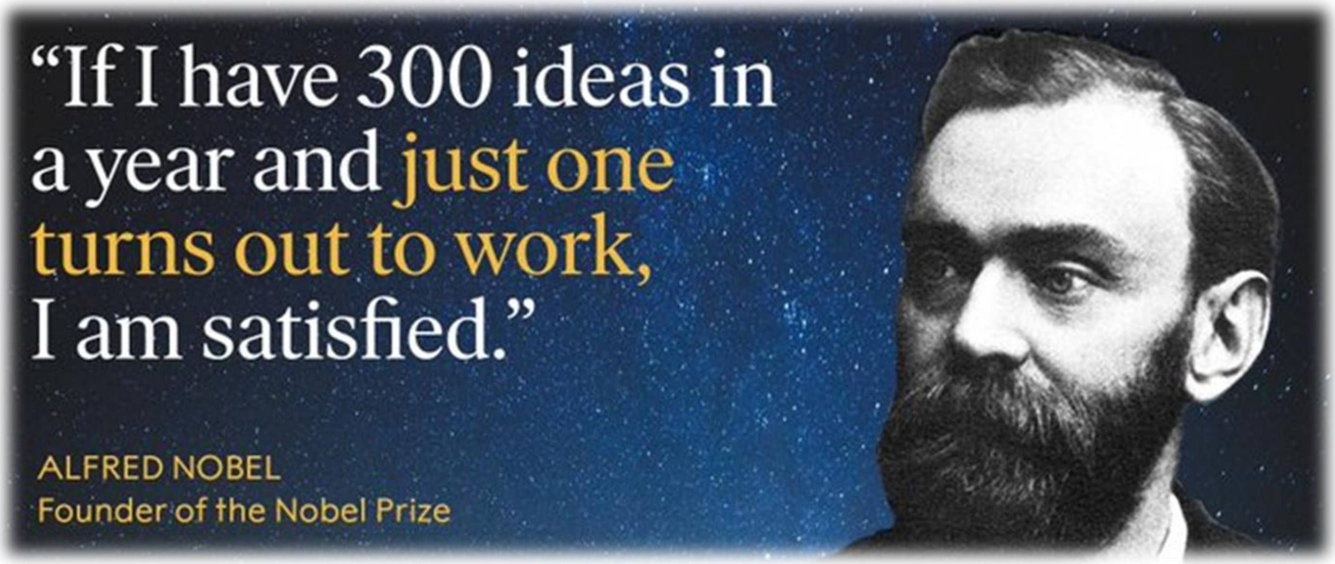
Sigurd Ehrenborg
former Lieutenant
Paris: 84 Boulevard Haussmann

R. W. Strehlenert
Civil Engineer
4, Passage Caroline

Thos Nordenfelt
Constructor
8, Rue Auber, Paris

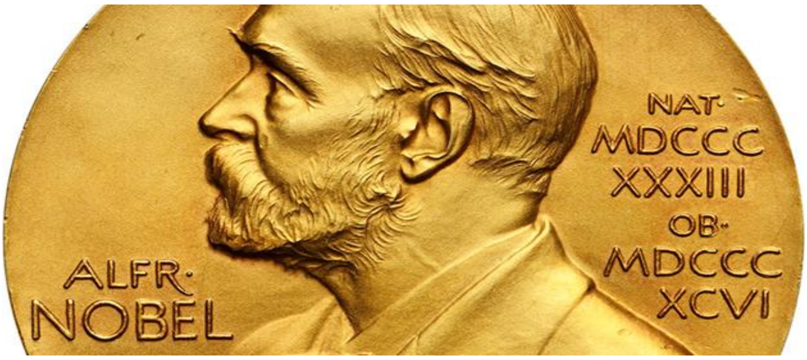
Leonard Hwass
Civil Engineer
4, Passage Caroline

****

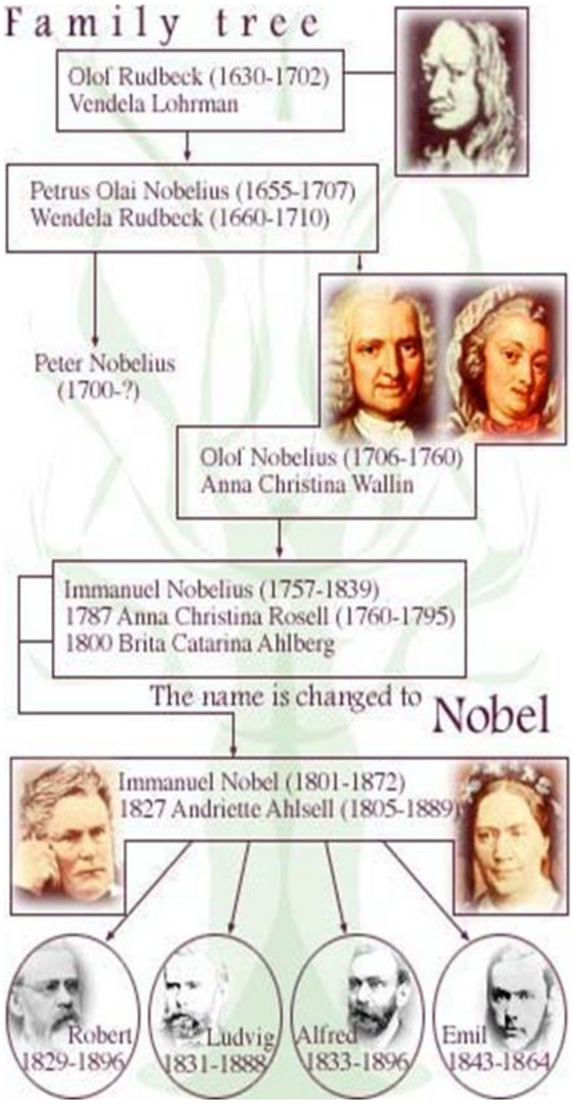

"If I have 300 ideas in a year and just one turns out to work, I am satisfied."
ALFRED NOBEL
Founder of the Nobel Prize

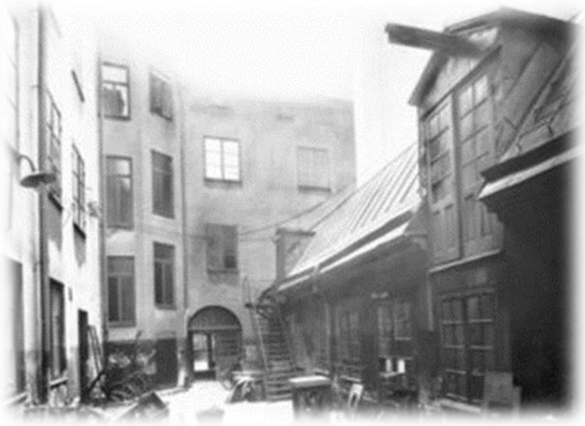
Pictures

Take you through his living, inventions, etc.,

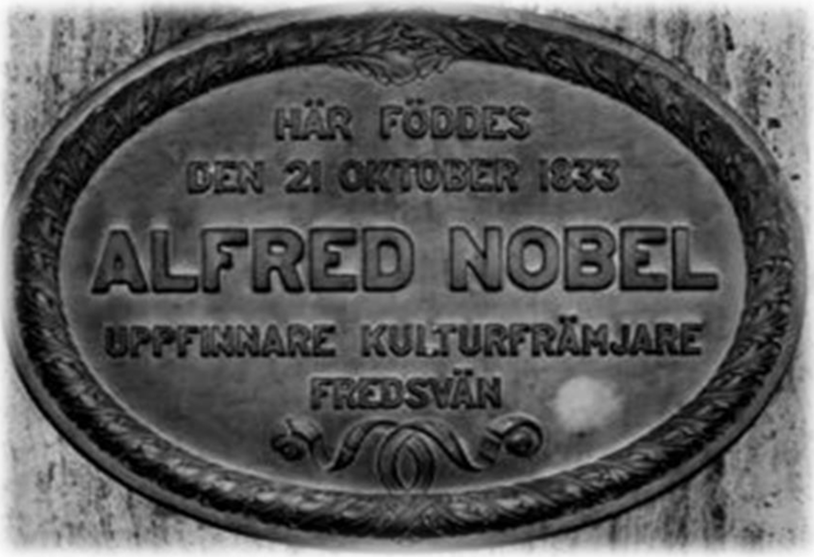


(😊)(😊)(😊)(😊)(😊)


Family tree
Olof Rudbeck (1630-1702)
Vendela Lohrman
Petrus Olai Nobelius (1655-1707)
Wendela Rudbeck (1660-1710)
Peter Nobelius
(1700-?)
Olof Nobelius (1706-1760)
Anna Christina Wallin
Immanuel Nobelius (1757-1839)
1787 Anna Christina Rosell (1760-1795)
1800 Brita Catarina Ahlberg
The name is changed to Nobel
Immanuel Nobel (1801-1872)
1827 Andriette Ahlsell (1805-1889)
Robert
1829-1896
Ludvig
1831-1888
Alfred
1833-1896
Emil
1843-1864



The house at Norrlandsgatan 9, Stockholm where Alfred Nobel was born. It was demolished in 1937.



This plate decorates the present building at Norrlandsgatan 9. It says: "Alfred Nobel, the inventor, culture promoter, pacifist was born here on October 21, 1833."

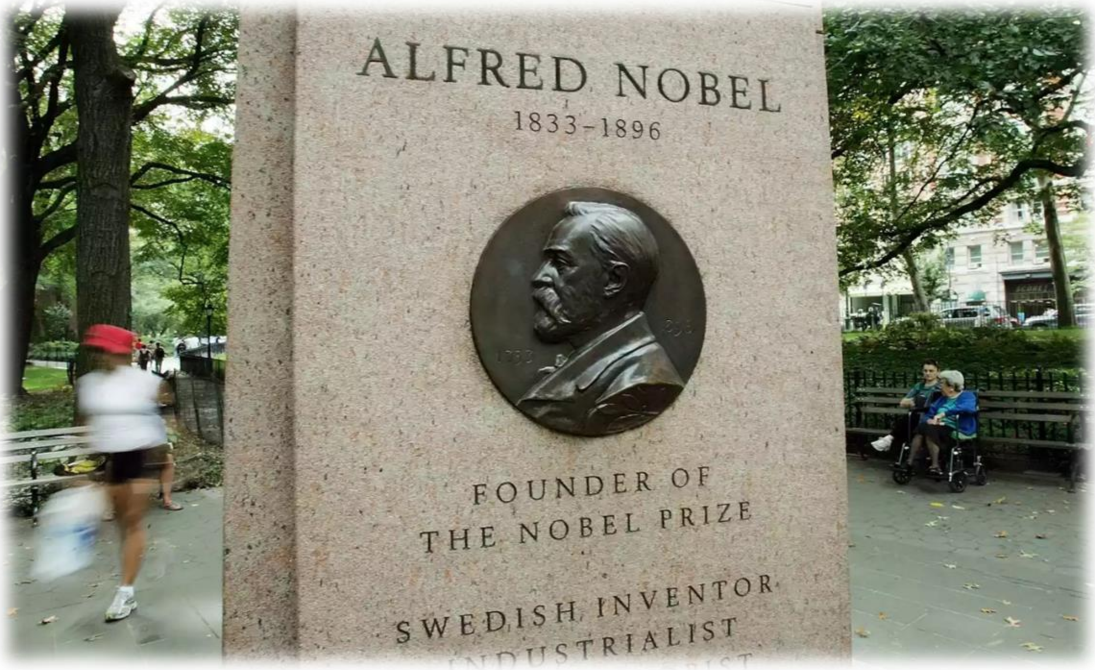
Alfred's birth place in Stockholm, Sweden.

The home of the Nobel family in St. Petersburg,
Russia in the 1840s

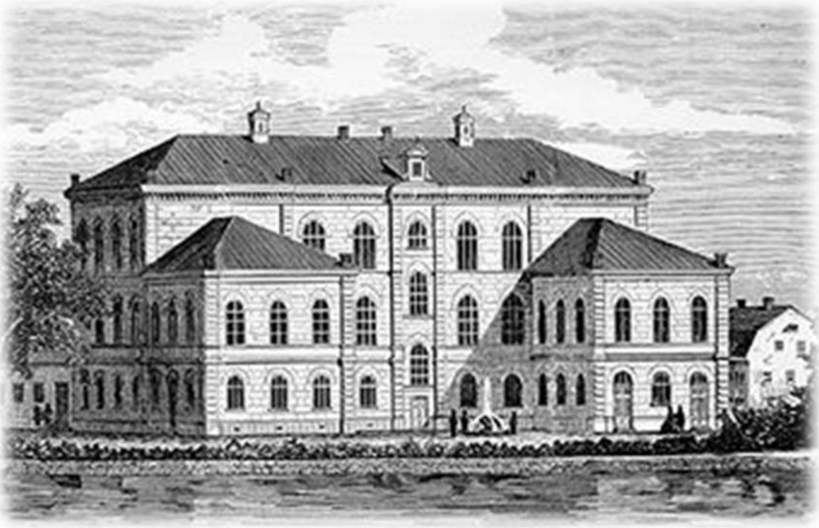
Nevskij Prospekt, the main street of St. Petersburg, in the 1870s.

Nobel monument “Blown up Tree” on the bank of the River Neva, St. Petersburg.

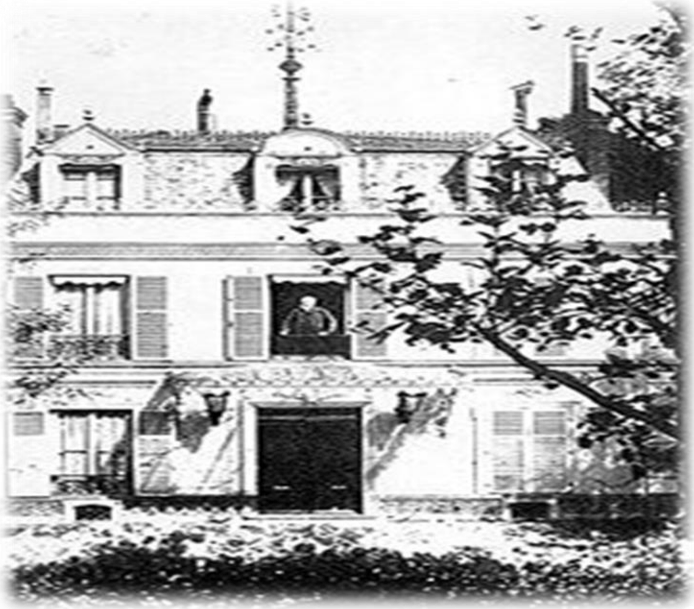
The Brothers Nobel (Branobel) factory, office and residence located near the Samson quay in St. Petersburg.



A monument to Alfred Nobel in New York City.



The Royal Caroline Medico-Surgical Institute at Hantverkargatan in Stockholm.

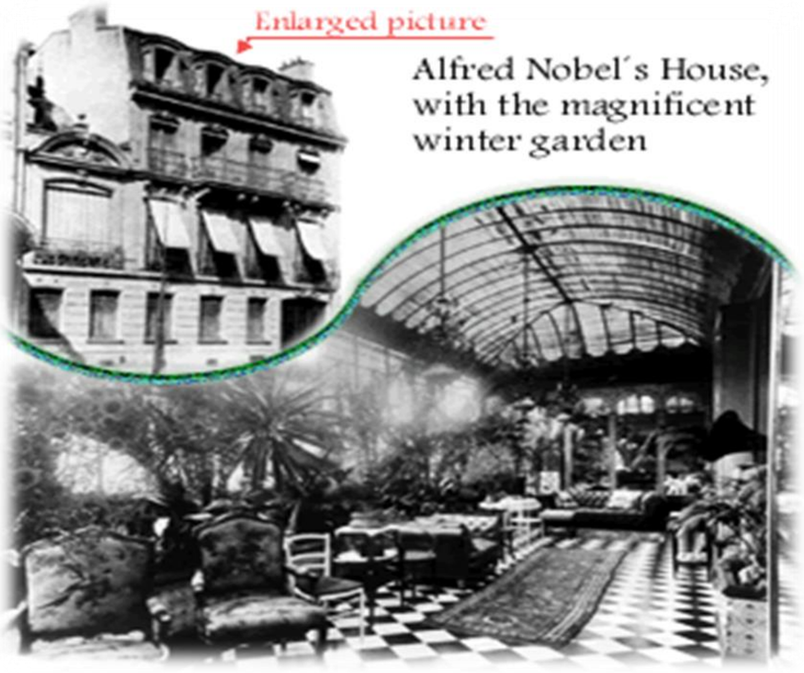


Victor Hugo (at the window) lived in this house on Avenue d'Eylau (now Avenue Victor Hugo), the same street where Alfred Nobel's companion, Sofie Hess, lived.

Villa Nobel in San Remo, Italy.

The Söder tunnel in Stockholm was built with help of Alfred Nobel’s blasting oil.

Alfred Nobel's house in Paris, 53 avenue Malakoff (later changed to 59, avenue Malakoff). Today it is avenue Raymond Poincaré.



The entrance to Villa Nobel.

A reproduction of the portrait of
Alfred Nobel's mother, one of the few personal
belongings he took with him from Paris.

A postcard view of Sanremo by the waterfront done by La Fotometalgrafica, Bologna, Italy.

The back view of Villa Nobel today.

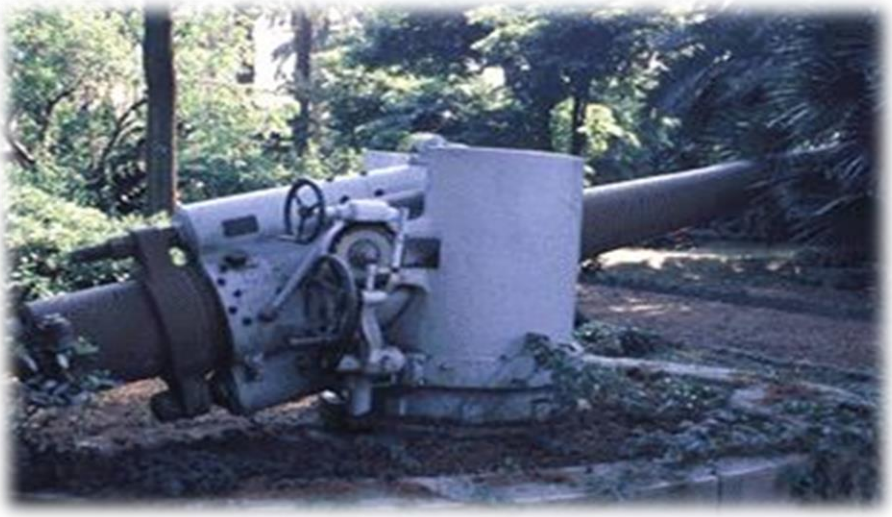
The larger laboratory room where chemical experiments were done.

Alfred Nobel (extreme right) and some guests on the grounds of Villa Nobel.

Alfred Nobel during one of his rare leisure moments.

Drawing of Alfred Nobel's house in Paris by Svenolov Ehrén.

Alfred Nobel's traveling bag.



One of two cannons shipped from Bofors and used for test-firings by Alfred Nobel.

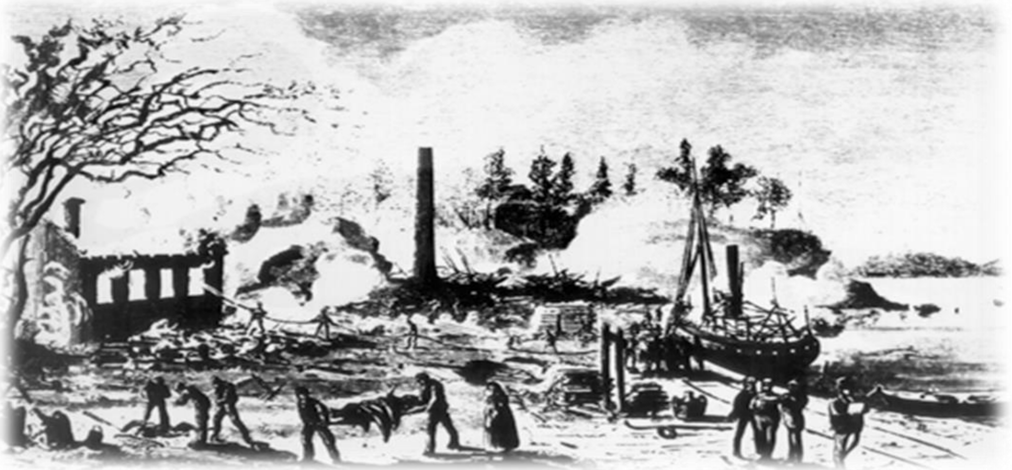
Björkborn Manor, in Karlskoga, was Alfred Nobel's last residence in Sweden.

The birthplace of Alfred Nobel at Norrlandsgatan in Stockholm

---

A painting of Immanuel Nobel demonstrating his naval or sea mines to the Tsar of Russia.

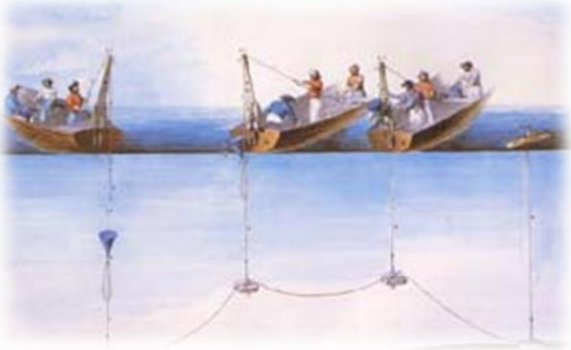
Barge on Lake Mälaren, Sweden where
Alfred Nobel later did his experiments.



Explosion in the laboratory in Stockholm.

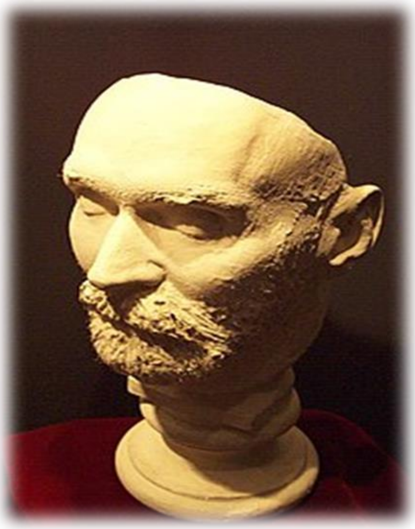
Alfred Nobel's laboratory in Bofors, Sweden.

A Painting illustrating tests he conducted in 1841.



A detailed study of the various stages of submerging the Nobel mines.

Towards the end of his life, Alfred Nobel acquired the company "AB Bofors" in Karlskoga, Sweden. At Björkborn, a property on the Bofors estate, Björkborn Manor became his last home in Sweden.



Alfred Nobel's death mask, at Björkborn, Nobel's residence
in Karlskoga, Sweden

The first Nobel Prize Award Ceremony in 1901 at the Royal Academy

----

The Royal Swedish Academy of Sciences' commemorative medal in honour of
Alfred Nobel and his work.

Bertha von Suttner

Meets Bertha von Suttner

Alfred had no family of his own. One day, he announced in the newspapers for a secretary. An Austrian lady, Bertha Kinsky von Chinic und Tettau got the job. After working for a short time, she moved back to Austria to marry Count Arthur von Suttner.

Alfred and Bertha von Suttner remained friends and exchanged letters through the years. She later became very active in the peace movement. She wrote the famous book "Lay Down Your Arms." When Alfred Nobel later wrote his will to establish the Nobel Prizes, he included a prize for persons or organizations who promoted peace.

(😊)(😊)(😊)(😊)(😊)

NOBEL PRIZE

Brief Details

The statutes of the Nobel Foundation it say: "A prize amount may be equally divided between two works, each of which is considered to merit a prize. If a work that is being rewarded has been produced by two or three persons, the prize shall be awarded to them jointly. In no case may a prize amount be divided between more than three persons."

Between 1901 and 2023, the Nobel Prizes and the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel were awarded 621 times to 1,000 people and organisations. With some receiving the Nobel Prize more than once, this makes a total of 965 individuals and 27 organisations.

621 Nobel Prizes

Between 1901 and 2023, the Nobel Prizes and the prize in economic sciences were awarded 621 times.

Nobel Prize	Number of prizes	Number of laureates	Awarded to one laureate	Shared by two laureates	Shared by three laureates
Physics	117	225	47	32	38
Chemistry	115	194	63	25	27
Medicine	114	227	40	35	39
Literature	116	120	112	4	–
Peace	104	111+30	70	31	3
Economic sciences	55	93	26	20	9
Total:	**621**	**1,000**	**358**	**147**	**116**

Please visit the following web page
to know the complete details of
Nobel Prizes awarded as indicated above

https://www.nobelprize.org/prizes/lists/all-nobel-prizes/

History

The Nobel Peace Prize and the other Nobel Prizes were established by the Swedish inventor and businessman Alfred Nobel through his last will.

When the Swedish businessman Alfred Nobel passed away in 1896, he left behind what was then one of the world's largest private fortunes. In his last will Nobel declared that the whole of his remaining fortune of 31, 5 million Swedish crowns was to be invested in safe securities and should constitute a fund "the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind"

Will

The will specified in which fields the prizes should be awarded – physics, chemistry, medicine or physiology, literature and peace – and which criteria the respective prize committees should apply when choosing their prize recipients. According to the will the Nobel Peace Prize was to be awarded "to the person who shall have done the most or the best work for fraternity between the nations and the abolition or reduction of standing armies and the formation and spreading of peace congresses."

Norwegian Nobel Committee

Alfred Nobel's will declared that the Nobel Peace Prize was to be awarded by a committee of five persons selected by the Norwegian Storting (parliament). The Storting accepted the assignment in April 1897, and the Nobel Committee of the Norwegian Storting was set up in August of the same year.

Nobel Foundation

In Sweden, however, Nobel's will triggered a lengthy legal battle with parts of the Nobel family. It was not until this conflict had been resolved, and financial matters had been satisfactorily arranged through the establishment of the Nobel Foundation in Sweden in 1900, that the Norwegian Nobel Committee and the other prize-awarding bodies could begin their work.

First award

The first Nobel Prizes were awarded in 1901. The Peace Prize for that year was shared between the Frenchman Frédéric Passy and the Swiss Jean Henry Dunant.

Wilhelm Röntgen

Received the first Physics Prize for his discovery of X-rays.

ALFRED NOBEL'S FORTUNE

When the Swedish businessman and inventor Alfred Nobel passed away in 1896, he left behind what was then one of the world's largest private fortunes.

In his will, Alfred Nobel determined that his assets should be invested in a fund consisting of safe securities. That meant that Nobel's worldwide interests in industrial enterprises would have to be liquidated. This demanding task was carried out by Nobel's young assistant Ragnar Sohlman and the engineer Rudolf Lilljequist. They soon joined forces with the young Swedish lawyer and peace activist Carl Lindhagen.

Most of the assets proved to be linked to Nobel's holdings in the Russian oil company Baku Petroleum and a hundred or so ammunition and dynamite factories in Europe, North and South America, Australia and South Africa. Nobel also had substantial shareholdings in various mining companies, including gold mines, as well as revenues from his 355 international patents. In addition he owned a yacht - the first in the world with an aluminium keel - a stud farm for riding horses, and three valuable properties: the villa Mio Nido in San Remo, an apartment in Paris, and the villa Björkborn in Karlskoga (where he never took up residence).

A particular problem was that the bulk of Nobel's securities and cash reserves were deposited in French banks in Paris, which could make it difficult for the estate to gain control of the assets without becoming subject to French inheritance tax. Sohlman solved the problem by single-handedly and in complete secrecy taking the securities out of the country - reputedly with a loaded pistol in his coat pocket just in case. The securities were then sold in London and Stockholm.

The fund acquired a total of SEK 31.5 million - a considerable amount given the value of the krone at the time. The money was then invested in so-called "gilt-edged bonds". The annual yield was to be spent on financing the five Nobel Prizes and the administration of the prize-awarding committees. With effect from 1900, responsibility for managing the assets Nobel had left was transferred to the newly-established Nobel Foundation in Stockholm.

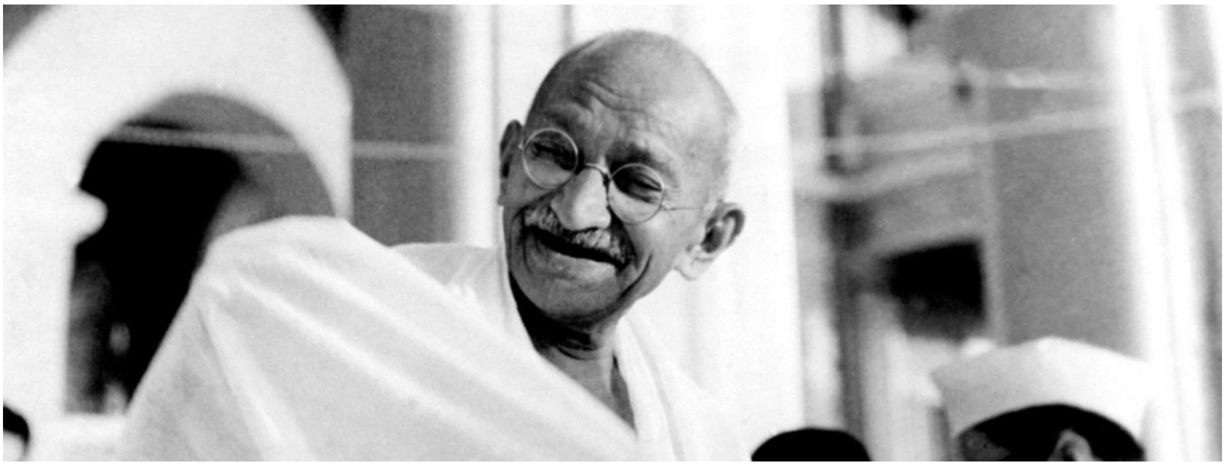
The nominal value of the individual Prizes awarded in 1901 was SEK 150,782 - close to 9 million Swedish crowns at 2016 rates. By the time of the centenary in 2001, the value of the Prize had risen to SEK 10 million, the highest amount ever both nominally and in real terms. In 2017 the value of the Peace Prize is 9 million Swedish crowns.

Nobel Prize

Awarded for	Contributions that have conferred the greatest benefit to humankind in the areas of Physics, Chemistry, Physiology or Medicine, Literature, Economics and Peace.
Country	• Sweden (all prizes except the Peace Prize) • Norway (Peace Prize only)
Presented by	• Royal Swedish Academy of Sciences (Physics, Chemistry and Economic Sciences) • Nobel Assembly at the Karolinska Institute (Physiology or Medicine) • Swedish Academy (Literature) • Norwegian Nobel Committee (Peace)
Reward(s)	A gold-plated green gold medal, a diploma, and a monetary award of 11 million SEK
First awarded	10 December 1901; 122 years ago
Number of laureates	609 prizes to 975 laureates (as of 2021)
Website	nobelprize.org

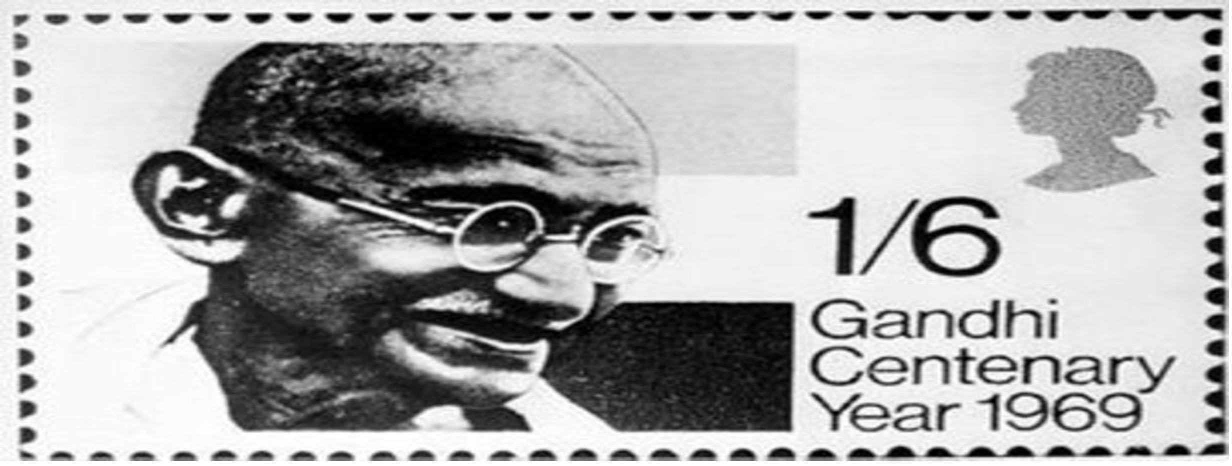
Mahatma Gandhi

The Missing Laureate



Mohandas Gandhi (1869-1948) has become the strongest symbol of non-violence in the 20th century. It is widely held – in retrospect – that the Indian national leader should have been the very man to be selected for the Nobel Peace Prize. He was nominated several times, but was never awarded the prize. Why?

These questions have been asked frequently: Was the horizon of the Norwegian Nobel Committee too narrow? Were the committee members unable to appreciate the struggle for freedom among non-European peoples?" Or were the Norwegian committee members perhaps afraid to make a prize award which might be detrimental to the relationship between their own country and Great Britain?



When still alive, Mohandas Gandhi had many admirers, both in India and abroad. But his martyrdom in 1948 made him an even greater symbol of peace. Twenty-one years later [1969 = his Centenary year], he was commemorated on this double-sized United Kingdom postage stamp.

https://www.nobelprize.org/prizes/themes/mahatma-gandhi-the-missing-laureate/

Mahatma Gandhi who played a prominent role in freeing India from the clutches of the 200-year-old rule of the British was nominated several times, but was never awarded the Nobel Peace Prize. On the eve of his 154th birth anniversary, the Nobel Prize panel explained why Mohandas Gandhi, who became the symbol of non-violence in the 20th century, was never awarded the prize.

He was nominated in 1937, 1938, 1939, 1947 and, finally, a few days before he was assassinated in January 1948. Failure to give the prize to Mahatma Gandhi before his death in 1948 is also seen by many as a mistake.

The reasons behind this omission are complex and multifaceted. One of the primary issues was that Mahatma Gandhi did not fit into the traditional categories identified by the Nobel Committee for potential recipients of the Prize. According to the committee, he was not a politician or proponent of international law, nor was he primarily a humanitarian relief worker or an organiser of international peace congresses.

Mahatma Gandhi's approach to peace and non-violence was unique and groundbreaking, which may have made it difficult for the committee to evaluate his contributions within their established framework.

First nomination

Gandhi was first nominated among 13 candidates in 1937 by a member of the Norweigian Parliament Ole Colbjørnsen. However, some panel members criticised him for not being consistently pacifist, and that some of his non-violent movements against the colonial power degenerated into violence and terror. They pointed out his first non-cooperation movement in India which turned violent after a crowd killed several policemen and set fire to a police station in Chauri Chaura. Other critics believed that Gandhi's views and ideals were primarily Indian and have no universal application.

Second and third nominations

The Norweigian parliamentarian renominated Gandhi in 1938 and 1939 but ten years were to pass before Gandhi made the short list again.

Fourth nomination

Gandhi's fourth nomination to Nobel committee was made in 1947. He was one of six members shortlisted to the committee's list.The panel members were, however, reluctant to award him the Peace Prize amid the India-Pakistan partition following the independence.

Fifth nomination

His last nomination was made few days before he was assassinated in 1948. A total of six letters of nomination were sent to the committee, some nominators being former laureates.

Since nobody was given a Peach Prize posthumously, the statutes at the time allowed to award the Prize after someone's death.

However after consideration, the panel members concluded that the posthumous awards should not take place unless the laureate died after the committee's decision had been made.

When the committee, for formal reasons, ended up not making such an award, they decided to reserve the prize, and then, one year later, not to spend the prize money for 1948 at all. What many thought should have been Mahatma Gandhi's place on the list of Laureates was silently but respectfully left open.

For complete and detailed information, kindly visit the following web link to know the official position of the Nobel Committee:

by Øyvind Tønnesson
Nobelprize.org Peace Editor, 1998-2000

https://www.nobelprize.org/prizes/themes/mahatma-gandhi-the-missing-laureate/

(😊)(😊)(😊)(😊)(😊)

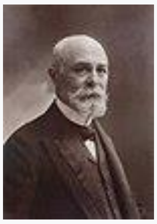
[When Gandhi met the literature laureate Rabindranath Tagore in 1940]

****

PHYSICS

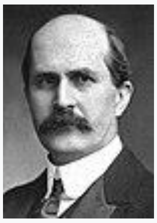
List of Laureates

The Nobel Prize in Physics has been awarded 117 times to 225 Nobel Prize laureates between 1901 and 2023. John Bardeen is the only laureate who has been awarded the Nobel Prize in Physics twice, in 1956 and 1972. This means that a total of 224 individuals have received the Nobel Prize in Physics.

Year	Image	Laureate	Country	Rationale
1901		Wilhelm Röntgen (1845–1923)	German Empire	"in recognition of the extraordinary services he has rendered by the discovery of the remarkable rays subsequently named after him"
1902		Hendrik Lorentz (1853–1928)	Netherlands	"in recognition of the extraordinary service they rendered by their researches into the influence of magnetism upon radiation phenomena"
		Pieter Zeeman (1865–1943)		
1903		Henri Becquerel (1852–1908)	France	"for his discovery of spontaneous radioactivity"

Year	Image	Laureate	Country	Rationale
		Pierre Curie (1859–1906)		"for their joint researches on the radiation phenomena discovered by Professor Henri Becquerel"
		Marie Curie (1867–1934)	Poland France	
1904		Lord Rayleigh (1842–1919)	United Kingdom	"for his investigations of the densities of the most important gases and for his discovery of argon in connection with these studies"
1905		Philipp Lenard (1862–1947)	German Empire	"for his work on cathode rays"
1906		J. J. Thomson (1856–1940)	United Kingdom	"for his theoretical and experimental investigations on the conduction of electricity by gases"
1907		Albert A. Michelson (1852–1931)	United States	"for his optical precision instruments and the spectroscopic and metrological investigations carried out with their aid"

Year	Image	Laureate	Country	Rationale
1908		Gabriel Lippmann (1845–1921)	France	"for his method of reproducing colours photographically based on the phenomenon of interference"
1909		Guglielmo Marconi (1874–1937)	Kingdom of Italy	"for their contributions to the development of wireless telegraphy"
		Karl Ferdinand Braun (1850–1918)	German Empire	
1910		Johannes Diderik van der Waals (1837–1923)	Netherlands	"for his work on the equation of state for gases and liquids"
1911		Wilhelm Wien (1864–1928)	German Empire	"for his discoveries regarding the laws governing the radiation of heat"
1912		Gustaf Dalén (1869–1937)	Sweden	"for his invention of automatic valves designed to be used in combination with gas accumulators in lighthouses and buoys"

Year	Image	Laureate	Country	Rationale
1913		Heike Kamerlingh Onnes (1853–1926)	Netherlands	"for his investigations on the properties of matter at low temperatures which led, inter alia, to the production of liquid helium"
1914		Max von Laue (1879–1960)	German Empire	"For his discovery of the diffraction of X-rays by crystals", an important step in the development of X-ray spectroscopy.
1915		William Henry Bragg (1862–1942)	United Kingdom	"'For their services in the analysis of crystal structure by means of X-rays', an important step in the development of X-ray crystallography"
		Lawrence Bragg (1890–1971)	United Kingdom	
1916				
1917		Charles Glover Barkla (1877–1944)	United Kingdom	"'For his discovery of the characteristic Röntgen radiation of the elements', another important step in the development of X-ray spectroscopy"
1918		Max Planck (1858–1947)	German Empire	"for the services he rendered to the advancement of physics by his discovery of energy quanta"

Year	Image	Laureate	Country	Rationale
1919		Johannes Stark (1874–1957)	Germany	"for his discovery of the Doppler effect in canal rays and the splitting of spectral lines in electric fields"
1920		Charles Édouard Guillaume (1861–1938)	Switzerland	"for the service he has rendered to precision measurements in physics by his discovery of anomalies in nickel-steel alloys"
1921		Albert Einstein (1879–1955)	Germany Switzerland	"for his services to theoretical physics, and especially for his discovery of the law of the photoelectric effect"
1922		Niels Bohr (1885–1962)	Denmark	"for his services in the investigation of the structure of atoms and of the radiation emanating from them"
1923		Robert Andrews Millikan (1868–1953)	United States	"for his work on the elementary charge of electricity and on the photoelectric effect"
1924		Manne Siegbahn (1886–1978)	Sweden	"for his discoveries and research in the field of X-ray spectroscopy"

Year	Image	Laureate	Country	Rationale
1925		James Franck (1882–1964)	Germany	"for their discovery of the laws governing the impact of an electron upon an atom"
		Gustav Hertz (1887–1975)		
1926		Jean Baptiste Perrin (1870–1942)	France	"for his work on the discontinuous structure of matter, and especially for his discovery of sedimentation equilibrium"
1927		Arthur Compton (1892–1962)	United States	"for his discovery of the effect named after him"
		Charles Thomson Rees Wilson (1869–1959)	United Kingdom	"for his method of making the paths of electrically charged particles visible by condensation of vapour"
1928		Owen Willans Richardson (1879–1959)	United Kingdom	"for his work on the thermionic phenomenon and especially for the discovery of the law named after him"

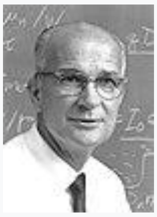
Year	Image	Laureate	Country	Rationale
1929		Louis Victor Pierre Raymond, 7th Duc de Broglie (1892–1987)	France	"for his discovery of the wave nature of electrons"
1930		C. V. Raman (1888–1970)	India	"for his work on the scattering of light and for the discovery of the effect named after him"
1931				
1932		Werner Heisenberg (1901–1976)	Germany	"for the creation of quantum mechanics, the application of which has, inter alia, led to the discovery of the allotropic forms of hydrogen"
1933		Erwin Schrödinger (1887–1961)	Austria	"for the discovery of new productive forms of atomic theory"
		Paul Dirac (1902–1984)	United Kingdom	
1934				

Year	Image	Laureate	Country	Rationale
1935		James Chadwick (1891–1974)	United Kingdom	"for the discovery of the neutron"
1936		Victor Francis Hess (1883–1964)	Austria	"for his discovery of cosmic radiation"
		Carl David Anderson (1905–1991)	United States	"for his discovery of the positron"
1937		Clinton Davisson (1881–1958)	United States	"for their experimental discovery of the diffraction of electrons by crystals"
		George Paget Thomson (1892–1975)	United Kingdom	
1938		Enrico Fermi (1901–1954)	Kingdom of Italy	"for his demonstrations of the existence of new radioactive elements produced by neutron irradiation, and for his related discovery of nuclear reactions brought about by slow neutrons"

Year	Image	Laureate	Country	Rationale
1939		Ernest Lawrence (1901–1958)	United States	"for the invention and development of the cyclotron and for results obtained with it, especially with regard to artificial radioactive elements"
1940				
1941				
1942				
1943		Otto Stern (1888–1969)	United States	"for his contribution to the development of the molecular ray method and his discovery of the magnetic moment of the proton"
1944		Isidor Isaac Rabi (1898–1988)	United States	"for his resonance method for recording the magnetic properties of atomic nuclei"
1945		Wolfgang Pauli (1900–1958)	Austria	"for the discovery of the Exclusion Principle, also called the Pauli principle"
1946		Percy Williams Bridgman (1882–1961)	United States	"for the invention of an apparatus to produce extremely high pressures, and for the discoveries he made there within the field of high pressure physics"

Year	Image	Laureate	Country	Rationale
1947		Edward Victor Appleton (1892–1965)	United Kingdom	"for his investigations of the physics of the upper atmosphere especially for the discovery of the so-called Appleton layer"
1948		Patrick Blackett (1897–1974)	United Kingdom	"for his development of the Wilson cloud chamber method, and his discoveries therewith in the fields of nuclear physics and cosmic radiation"
1949		Hideki Yukawa (1907–1981)	Japan	"for his prediction of the existence of mesons on the basis of theoretical work on nuclear forces"
1950		C. F. Powell (1903–1969)	United Kingdom	"for his development of the photographic method of studying nuclear processes and his discoveries regarding mesons made with this method"
1951		John Cockcroft (1897–1967)	United Kingdom	"for their pioneer work on the transmutation of atomic nuclei by artificially accelerated atomic particles"
		Ernest Walton (1903–1995)	Ireland	

Year	Image	Laureate	Country	Rationale
1952		Felix Bloch (1905–1983)	United States	"for their development of new methods for nuclear magnetic precision measurements and discoveries in connection therewith"
		Edward Mills Purcell (1912–1997)		
1953		Frits Zernike (1888–1966)	Netherlands	"for his demonstration of the phase contrast method, especially for his invention of the phase contrast microscope"
1954		Max Born (1882–1970)	West Germany	"for his fundamental research in quantum mechanics, especially for his statistical interpretation of the wavefunction"
		Walther Bothe (1891–1957)		"for the coincidence method and his discoveries made therewith"
1955		Willis Lamb (1913–2008)	United States	"for his discoveries concerning the fine structure of the hydrogen spectrum"

Year	Image	Laureate	Country	Rationale
		Polykarp Kusch (1911–1993)	United States	"for his precision determination of the magnetic moment of the electron"
1956		John Bardeen (1908–1991)	United States	"for their researches on semiconductors and their discovery of the transistor effect"
		Walter Houser Brattain (1902–1987)		
		William Shockley (1910–1989)		
1957		Lee Tsung-Dao (b. 1926)	Republic of China	"for their penetrating investigation of the so-called parity laws which has led to important discoveries regarding the elementary particles"
		Yang Chen-Ning (b. 1922)		

Year	Image	Laureate	Country	Rationale
1958		Pavel Cherenkov (1904–1990)	Soviet Union	"for the discovery and the interpretation of the Cherenkov effect"
		Ilya Frank (1908–1990)		
		Igor Tamm (1895–1971)		
1959		Emilio Segrè (1905–1989)	United States	"for their discovery of the antiproton"
		Owen Chamberlain (1920–2006)		
1960		Donald A. Glaser (1926–2013)	United States	"for the invention of the bubble chamber"

Year	Image	Laureate	Country	Rationale
1961		Robert Hofstadter (1915–1990)	United States	"for his pioneering studies of electron scattering in atomic nuclei and for his thereby achieved discoveries concerning the structure of the nucleons"
		Rudolf Mössbauer (1929–2011)	West Germany	"for his researches concerning the resonance absorption of gamma radiation and his discovery in this connection of the effect which bears his name"
1962		Lev Landau (1908–1968)	Soviet Union	"for his pioneering theories for condensed matter, especially liquid helium"
1963		Eugene Wigner (1902–1995)	United States	"for his contributions to the theory of the atomic nucleus and the elementary particles, particularly through the discovery and application of fundamental symmetry principles"
		Maria Goeppert-Mayer (1906–1972)	United States	"for their discoveries concerning nuclear shell structure"
		J. Hans D. Jensen (1907–1973)	West Germany	

Year	Image	Laureate	Country	Rationale
1964		Nikolay Basov (1922–2001)	Soviet Union	"for fundamental work in the field of quantum electronics, which has led to the construction of oscillators and amplifiers based on the maser–laser principle"
		Alexander Prokhorov (1916–2002)		
		Charles H. Townes (1915–2015)	United States	
1965		Richard Feynman (1918–1988)	United States	"for their fundamental work in quantum electrodynamics (QED), with deep-ploughing consequences for the physics of elementary particles"
		Julian Schwinger (1918–1994)		
		Shin'ichirō Tomonaga (1906–1979)	Japan	

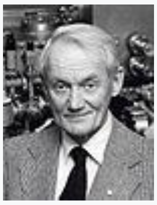
Year	Image	Laureate	Country	Rationale
1966		Alfred Kastler (1902–1984)	France	"for the discovery and development of optical methods for studying Hertzian resonances in atoms"
1967		Hans Bethe (1906–2005)	United States	"for his contributions to the theory of nuclear reactions, especially his discoveries concerning the energy production in stars"
1968		Luis Alvarez (1911–1988)	United States	"for his decisive contributions to elementary particle physics, in particular the discovery of a large number of resonance states, made possible through his development of the technique of using hydrogen bubble chamber and data analysis"
1969		Murray Gell-Mann (1929–2019)	United States	"for his contributions and discoveries concerning the classification of elementary particles and their interactions"
1970		Hannes Alfvén (1908–1995)	Sweden	"for fundamental work and discoveries in magneto-hydrodynamics with fruitful applications in different parts of plasma physics"
		Louis Néel (1904–2000)	France	"for fundamental work and discoveries concerning antiferromagnetism and ferrimagnetism which have led to important applications in solid state physics"

Year	Image	Laureate	Country	Rationale
1971		Dennis Gabor (1900–1979)	United Kingdom	"for his invention and development of the holographic method"
1972		John Bardeen (1908–1991)	United States	"for their jointly developed theory of superconductivity, usually called the BCS-theory"
		Leon Cooper (b. 1930)		
		John Robert Schrieffer (1931–2019)		
1973		Leo Esaki (b. 1925)	Japan	"for their experimental discoveries regarding tunneling phenomena in semiconductors and superconductors, respectively"
		Ivar Giaever (b. 1929)	United States	

Year	Image	Laureate	Country	Rationale
		Brian Josephson (b. 1940)	🇬🇧 United Kingdom	"for his theoretical predictions of the properties of a supercurrent through a tunnel barrier, in particular those phenomena which are generally known as the Josephson effect"
1974		Martin Ryle (1918–1984)	🇬🇧 United Kingdom	"for their pioneering research in radio astrophysics: Ryle for his observations and inventions, in particular of the aperture synthesis technique, and Hewish for his decisive role in the discovery of pulsars"
		Antony Hewish (1924–2021)		
1975		Aage Bohr (1922–2009)	🇩🇰 Denmark	"for the discovery of the connection between collective motion and particle motion in atomic nuclei and the development of the theory of the structure of the atomic nucleus based on this connection"

Year	Image	Laureate	Country	Rationale
		Ben Roy Mottelson (1926–2022)		
		James Rainwater (1917–1986)	United States	
1976		Samuel C. C. Ting (b. 1936)	United States	"for their pioneering work in the discovery of a heavy elementary particle of a new kind"
		Burton Richter (1931–2018)		
1977		Philip Warren Anderson (1923–2020)	United States	"for their fundamental theoretical investigations of the electronic structure of magnetic and disordered systems"
		Nevill Francis Mott (1905–1996)	United Kingdom	
		John Hasbrouck Van Vleck (1899–1980)	United States	

Year	Image	Laureate	Country	Rationale
1978		Pyotr Kapitsa (1894–1984)	Soviet Union	"for his basic inventions and discoveries in the area of low-temperature physics"
		Arno Allan Penzias (1933–2024)	United States	"for their discovery of cosmic microwave background radiation"
		Robert Woodrow Wilson (b. 1936)		
1979		Sheldon Glashow (b. 1932)	United States	"for their contributions to the theory of the unified weak and electromagnetic interaction between elementary particles, including, inter alia, the prediction of the weak neutral current"
		Abdus Salam (1926–1996)	Pakistan	
		Steven Weinberg (1933–2021)	United States	
1980		James Cronin (1931–2016)	United States	"for the discovery of violations of fundamental symmetry principles in the decay of neutral K-mesons"

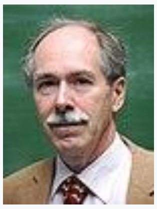
Year	Image	Laureate	Country	Rationale
		Val Logsdon Fitch (1923–2015)		
1981		Nicolaas Bloembergen (1920–2017)	🇺🇸 United States	"for their contribution to the development of laser spectroscopy"
		Arthur Leonard Schawlow (1921–1999)		
		Kai Siegbahn (1918–2007)	🇸🇪 Sweden	"for his contribution to the development of high-resolution electron spectroscopy"
1982		Kenneth G. Wilson (1936–2013)	🇺🇸 United States	"for his theory for critical phenomena in connection with phase transitions"
1983		Subrahmanyan Chandrasekhar (1910–1995)		"for his theoretical studies of the physical processes of importance to the structure and evolution of the stars"
		William Alfred Fowler (1911–1995)	🇺🇸 United States	"for his theoretical and experimental studies of the nuclear reactions of importance in the formation of the chemical elements in the universe"

Year	Image	Laureate	Country	Rationale
1984		Carlo Rubbia (b. 1934)	Italy	"for their decisive contributions to the large project, which led to the discovery of the field particles W and Z, communicators of weak interaction"
		Simon van der Meer (1925–2011)	Netherlands	
1985		Klaus von Klitzing (b. 1943)	West Germany	"for the discovery of the quantized Hall effect"
1986		Ernst Ruska (1906–1988)	West Germany	"for his fundamental work in electron optics, and for the design of the first electron microscope"
		Gerd Binnig (b. 1947)	West Germany	"for their design of the scanning tunneling microscope"
		Heinrich Rohrer (1933–2013)	Switzerland	
1987		Georg Bednorz (b. 1950)	West Germany	"for their important break-through in the discovery of superconductivity in ceramic materials"

Year	Image	Laureate	Country	Rationale
		K. Alex Müller (1927–2023)	Switzerland	
1988		Leon M. Lederman (1922–2018)	United States	"for the neutrino beam method and the demonstration of the doublet structure of the leptons through the discovery of the muon neutrino"
		Melvin Schwartz (1932–2006)		
		Jack Steinberger (1921–2020)		
1989		Norman Foster Ramsey Jr. (1915–2011)	United States	"for the invention of the separated oscillatory fields method and its use in the hydrogen maser and other atomic clocks"
		Hans Georg Dehmelt (1922–2017)		"for the development of the ion trap technique"
		Wolfgang Paul (1913–1993)	West Germany	
1990		Jerome I. Friedman (b. 1930)	United States	"for their pioneering investigations concerning deep inelastic scattering of electrons on protons and bound neutrons, which have been of essential importance

Year	Image	Laureate	Country	Rationale
		Henry Way Kendall (1926–1999)		for the development of the quark model in particle physics"
		Richard E. Taylor (1929–2018)	Canada	
1991		Pierre-Gilles de Gennes (1932–2007)	France	"for discovering that methods developed for studying order phenomena in simple systems can be generalized to more complex forms of matter, in particular to liquid crystals and polymers"
1992		Georges Charpak (1924–2010)	France	"for his invention and development of particle detectors, in particular the multiwire proportional chamber"
1993		Russell Alan Hulse (b. 1950)	United States	"for the discovery of a new type of pulsar, a discovery that has opened up new possibilities for the study of gravitation"
		Joseph Hooton Taylor Jr. (b. 1941)		
1994		Bertram Brockhouse (1918–2003)	Canada	"for the development of neutron spectroscopy" and "for pioneering contributions to the development of neutron scattering techniques for studies of condensed matter"

Year	Image	Laureate	Country	Rationale
		Clifford Shull (1915–2001)	United States	"for the development of the neutron diffraction technique" and "for pioneering contributions to the development of neutron scattering techniques for studies of condensed matter"
1995		Martin Lewis Perl (1927–2014)	United States	"for the discovery of the tau lepton" and "for pioneering experimental contributions to lepton physics"
		Frederick Reines (1918–1998)		"for the detection of the neutrino" and "for pioneering experimental contributions to lepton physics"
1996		David Lee (b. 1931)	United States	"for their discovery of superfluidity in helium-3"
		Douglas D. Osheroff (b. 1945)		
		Robert Coleman Richardson (1937–2013)		
1997		Steven Chu (b. 1948)	United States	"for development of methods to cool and trap atoms with laser light."

Year	Image	Laureate	Country	Rationale
		Claude Cohen-Tannoudji (b. 1933)	France	
		William Daniel Phillips (b. 1948)	United States	
1998		Robert B. Laughlin (b. 1950)	United States	"for their discovery of a new form of quantum fluid with fractionally charged excitations"
		Horst Ludwig Störmer (b. 1949)	Germany	
		Daniel C. Tsui (b. 1939)	United States	
1999		Gerard 't Hooft (b. 1946)	Netherlands	"for elucidating the quantum structure of electroweak interactions in physics"
		Martinus J. G. Veltman (1931–2021)		

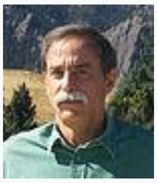
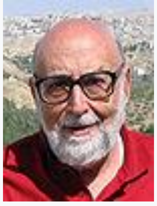
Year	Image	Laureate	Country	Rationale
2000		Zhores Alferov (1930–2019)	🇷🇺 Russia	"for developing semiconductor heterostructures used in high-speed- and optoelectronics"
		Herbert Kroemer (b. 1928)	🇩🇪 Germany	
		Jack Kilby (1923–2005)	🇺🇸 United States	"for his part in the invention of the integrated circuit"
2001		Eric Allin Cornell (b. 1961)	🇺🇸 United States	"for the achievement of Bose–Einstein condensation in dilute gases of alkali atoms, and for early fundamental studies of the properties of the condensates"
		Carl Wieman (b. 1951)		
		Wolfgang Ketterle (b. 1957)	🇩🇪 Germany	

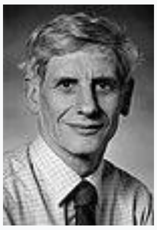
Year	Image	Laureate	Country	Rationale
2002		Raymond Davis Jr. (1914–2006)	United States	"for pioneering contributions to astrophysics, in particular for the detection of cosmic neutrinos"
		Masatoshi Koshiba (1926–2020)	Japan	
		Riccardo Giacconi (1931–2018)	United States Italy	"for pioneering contributions to astrophysics, which have led to the discovery of cosmic X-ray sources"
2003		Alexei Alexeyevich Abrikosov (1928–2017)	Russia United States	"for pioneering contributions to the theory of superconductors and superfluids"
		Vitaly Ginzburg (1916–2009)	Russia	
		Anthony James Leggett (b. 1938)	United Kingdom United States	

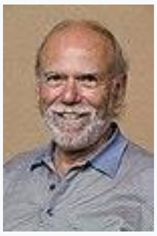
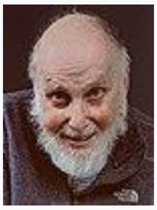
Year	Image	Laureate	Country	Rationale
2004		David Gross (b. 1941)	United States	"for the discovery of asymptotic freedom in the theory of the strong interaction"
		Hugh David Politzer (b. 1949)		
		Frank Wilczek (b. 1951)		
2005		Roy J. Glauber (1925–2018)	United States	"for his contribution to the quantum theory of optical coherence"
		John L. Hall (b. 1934)		"for their contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique"
		Theodor W. Hänsch (b. 1941)	Germany	
2006		John C. Mather (b. 1946)	United States	"for their discovery of the blackbody form and anisotropy of the cosmic microwave background radiation"

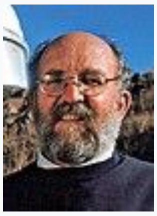
Year	Image	Laureate	Country	Rationale
		George Smoot (b. 1945)		
2007		Albert Fert (b. 1938)	France	"for the discovery of giant magnetoresistance"
		Peter Grünberg (1939–2018)	Germany	
2008		Makoto Kobayashi (b. 1944)	Japan	"for the discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature"
		Toshihide Maskawa (1940–2021)		
		Yoichiro Nambu (1921–2015)	United States	"for the discovery of the mechanism of spontaneous broken symmetry in subatomic physics"
2009		Charles K. Kao (1933–2018)	Hong Kong United Kingdom	"for groundbreaking achievements concerning the transmission of light in fibers for optical communication"

Year	Image	Laureate	Country	Rationale
		Willard S. Boyle (1924–2011)	United States	"for the invention of an imaging semiconductor circuit – the CCD sensor"
		George E. Smith (b. 1930)		
2010		Andre Geim (b. 1958)	United Kingdom	"for groundbreaking experiments regarding the two-dimensional material graphene"
		Konstantin Novoselov (b. 1974)		
2011		Saul Perlmutter (b. 1959)	United States	"for the discovery of the accelerating expansion of the Universe through observations of distant supernovae"
		Brian P. Schmidt (b. 1967)	Australia	

Year	Image	Laureate	Country	Rationale
		Adam G. Riess (b. 1969)	United States	
2012		Serge Haroche (b. 1944)	France	"for ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems."
		David J. Wineland (b. 1944)	United States	
2013		François Englert (b. 1932)	Belgium	"for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which recently was confirmed through the discovery of the predicted fundamental particle, by the ATLAS and CMS experiments at CERN's Large Hadron Collider"
		Peter Higgs (b. 1929)	United Kingdom	
2014		Isamu Akasaki (1929–2021)	Japan	"for the invention of efficient blue light-emitting diodes which has enabled bright and energy-saving white light sources"

Year	Image	Laureate	Country	Rationale
		Hiroshi Amano (b. 1960)		
		Shuji Nakamura (b. 1954)	United States	
2015		Takaaki Kajita (b. 1959)	Japan	"for the discovery of neutrino oscillations, which shows that neutrinos have mass"
		Arthur B. McDonald (b. 1943)	Canada	
2016		David J. Thouless (1934–2019)	United Kingdom	"for theoretical discoveries of topological phase transitions and topological phases of matter"
		Duncan Haldane (b. 1951)	United Kingdom	
		John M. Kosterlitz (b. 1943)	United States	

Year	Image	Laureate	Country	Rationale
2017		Rainer Weiss (b. 1932)	🇺🇸 United States	"for decisive contributions to the LIGO detector and the observation of gravitational waves"
		Kip Thorne (b. 1940)	🇺🇸 United States	
		Barry Barish (b. 1936)		
2018		Arthur Ashkin (1922–2020)	🇺🇸 United States	"for groundbreaking inventions in the field of laser physics", in particular "for the optical tweezers and their application to biological systems"
		Gérard Mourou (b. 1944)	🇫🇷 France	"for groundbreaking inventions in the field of laser physics", in particular "for their method of generating high-intensity, ultra-short optical pulses"
		Donna Strickland (b. 1959)	🇨🇦 Canada	

Year	Image	Laureate	Country	Rationale
2019		James Peebles (b. 1935)	United States	"for theoretical discoveries in physical cosmology"
		Michel Mayor (b. 1942)	Switzerland	"for the discovery of an exoplanet orbiting a solar-type star"
		Didier Queloz (b. 1966)	- Switzerland - United Kingdom	
2020		Roger Penrose (b. 1931)	United Kingdom	"for the discovery that black hole formation is a robust prediction of the general theory of relativity"
		Reinhard Genzel (b. 1952)	Germany	"for the discovery of a supermassive compact object at the centre of our galaxy"
		Andrea M. Ghez (b. 1965)	United States	
2021		Syukuro Manabe (b. 1931)	United States[125]	"for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming"
		Klaus Hasselmann (b. 1931)	Germany	

Year	Image	Laureate	Country	Rationale
		Giorgio Parisi (b. 1948)	Italy	"for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales"
2022		Alain Aspect (b. 1947)	France	"for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science"
		John Clauser (b. 1942)	United States	
		Anton Zeilinger (b. 1945)	Austria	
2023		Anne L'Huillier (b. 1958)	France Sweden	"for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter"
		Ferenc Krausz (b. 1962)	Austria Hungary	
		Pierre Agostini (b. 1941)	France	

Country	Number of Nobel laureates
United States	90
Germany	26
United Kingdom	23
France	16
Russia	10
Netherlands	9
Japan	9
Canada	6
Switzerland	6
Austria	5
Italy	6
Sweden	4
Denmark	3
China	2
Hungary	2
Republic of China	2

Country	Number of Nobel laureates
Australia	1
Norway	1
Poland	1
Ireland	1
Pakistan	1
Belgium	1
India	1

(😊)(😊)(😊)

CHEMISTRY

LIST OF LAUREATES

The Nobel Prize in Chemistry has been awarded 115 times to 194 Nobel Prize laureates between 1901 and 2023. Frederick Sanger and Barry Sharpless have both been awarded the Nobel Prize in Chemistry twice. This means that a total of 192 individuals have received the Nobel Prize in Chemistry.

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1901		Jacobus Henricus van 't Hoff (1852–1911)	Netherlands	"[for his] discovery of the laws of chemical dynamics and osmotic pressure in solutions"
1902		Hermann Emil Fischer (1852–1919)	Germany	"[for] his work on sugar and purine syntheses"
1903		Svante August Arrhenius (1859–1927)	Sweden	"[for] his electrolytic theory of dissociation"
1904		Sir William Ramsay (1852–1916)	United Kingdom	"[for his] discovery of the inert gaseous elements in air, and his determination of their place in the periodic system"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1905		Adolf von Baeyer (1835–1917)	Germany	"[for] the advancement of organic chemistry and the chemical industry, through his work on organic dyes and hydroaromatic compounds"
1906		Henri Moissan (1852–1907)	France	"[for his] investigation and isolation of the element fluorine, and for [the] electric furnace called after him"
1907		Eduard Buchner (1860–1917)	Germany	"for his biochemical researches and his discovery of cell-free fermentation"
1908		Ernest Rutherford (1871–1937)	United Kingdom New Zealand	"for his investigations into the disintegration of the elements, and the chemistry of radioactive substances"
1909		Wilhelm Ostwald (1853–1932)	Germany	"[for] his work on catalysis and for his investigations into the fundamental principles governing chemical equilibria and rates of reaction"
1910		Otto Wallach (1847–1931)	Germany	"[for] his services to organic chemistry and the chemical industry by his pioneer work in the field of alicyclic compounds"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1911		Marie Curie, née Skłodowska (1867–1934)	Poland (Russian Empire) France	"[for] the discovery of the elements radium and polonium, by the isolation of radium and the study of the nature and compounds of this remarkable element"
1912		Victor Grignard (1871–1935)	France	"for the discovery of the [...] Grignard reagent"
		Paul Sabatier (1854–1941)	France	"for his method of hydrogenating organic compounds in the presence of finely disintegrated metals"
1913		Alfred Werner (1866–1919)	Switzerland	"[for] his work on the linkage of atoms in molecules [...] especially in inorganic chemistry"
1914		Theodore William Richards (1868–1928)	United States	"[for] his accurate determinations of the atomic weight of a large number of chemical elements"
1915		Richard Martin Willstätter (1872–1942)	Germany	"for his researches on plant pigments, especially chlorophyll"
1916				
1917				

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1918		Fritz Haber (1868–1934)	Germany	"for the synthesis of ammonia from its elements"
1919				
1920		Walther Hermann Nernst (1864–1941)	Germany	"[for] his work in thermochemistry"
1921		Frederick Soddy (1877–1956)	United Kingdom	"for his contributions to our knowledge of the chemistry of radioactive substances, and his investigations into the origin and nature of isotopes"
1922		Francis William Aston (1877–1945)	United Kingdom	"for his discovery, by means of his mass spectrograph, of isotopes, in a large number of non-radioactive elements, and for his enunciation of the whole-number rule"
1923		Fritz Pregl (1869–1930)	Austria Kingdom of Yugoslavia	"for his invention of the method of micro-analysis of organic substances"
1924				

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1925		Richard Adolf Zsigmondy (1865–1929)	Germany Hungary	"for his demonstration of the heterogeneous nature of colloid solutions and for the methods he used"
1926		The (Theodor) Svedberg (1884–1971)	Sweden	"for his work on disperse systems"
1927		Heinrich Otto Wieland (1877–1957)	Germany	"for his investigations of the constitution of the bile acids and related substances"
1928		Adolf Otto Reinhold Windaus (1876–1959)	Germany	"[for] his research into the constitution of the sterols and their connection with the vitamins"
1929		Arthur Harden (1865–1940)	United Kingdom	"for their investigations on the fermentation of sugar and fermentative enzymes"
		Hans Karl August Simon von Euler-Chelpin (1873–1964)	Sweden Germany	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1930		Hans Fischer (1881–1945)	Germany	"for his researches into the constitution of haemin and chlorophyll and especially for his synthesis of haemin"
1931		Carl Bosch (1874–1940)	Germany	"[for] their contributions to the invention and development of chemical high pressure methods"
		Friedrich Bergius (1884–1949)	Germany	
1932		Irving Langmuir (1881–1957)	United States	"for his discoveries and investigations in surface chemistry"
1933				
1934		Harold Clayton Urey (1893–1981)	United States	"for his discovery of heavy hydrogen"
1935		Frédéric Joliot (1900–1958)	France	"[for] their synthesis of new radioactive elements"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Irène Joliot-Curie (1897–1956)	France	
1936		Peter Debye (1884–1966)	Netherlands	"[for his work on] molecular structure through his investigations on dipole moments and the diffraction of X-rays and electrons in gases"
1937		Walter Norman Haworth (1883–1950)	United Kingdom	"for his investigations on carbohydrates and vitamin C"
		Paul Karrer (1889–1971)	Switzerland	"for his investigations on carotenoids, flavins and vitamins A and B_2"
1938		Richard Kuhn (1900–1967)	Germany	"for his work on carotenoids and vitamins"
1939		Adolf Friedrich Johann Butenandt (1903–1995)	Germany	"for his work on sex hormones"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Leopold Ružička (1887–1976)	Kingdom of Yugoslavia Switzerland	"for his work on polymethylenes and higher terpenes"
1940				
1941				
1942				
1943		George de Hevesy (1885–1966)	Hungary	"for his work on the use of isotopes as tracers in the study of chemical processes"
1944		Otto Hahn (1879–1968)	Germany	"for his discovery of the fission of heavy nuclei"
1945		Artturi Ilmari Virtanen (1895–1973)	Finland	"for his research and inventions in agricultural and nutrition chemistry, especially for his fodder preservation method"
1946		James Batcheller Sumner (1887–1955)	United States	"for his discovery that enzymes can be crystallized"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		John Howard Northrop (1891–1987)	United States	"for their preparation of enzymes and virus proteins in a pure form"
		Wendell Meredith Stanley (1904–1971)	United States	
1947		Sir Robert Robinson (1886–1975)	United Kingdom	"for his investigations on plant products of biological importance, especially the alkaloids"
1948		Arne Wilhelm Kaurin Tiselius (1902–1971)	Sweden	"for his research on electrophoresis and adsorption analysis, especially for his discoveries concerning the complex nature of the serum proteins"
1949		William Francis Giauque (1895–1982)	United States	"for his contributions in the field of chemical thermodynamics, particularly concerning the behaviour of substances at extremely low temperatures"
1950		Otto Paul Hermann Diels (1876–1954)	West Germany	"for their discovery and development of the diene synthesis"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Kurt Alder (1902–1958)	West Germany	
1951		Edwin Mattison McMillan (1907–1991)	United States	"for their discoveries in the chemistry of transuranium elements"
		Glenn Theodore Seaborg (1912–1999)	United States	
1952		Archer John Porter Martin (1910–2002)	United Kingdom	"for their invention of partition chromatography"
		Richard Laurence Millington Synge (1914–1994)	United Kingdom	
1953		Hermann Staudinger (1881–1965)	West Germany	"for his discoveries in the field of macromolecular chemistry"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1954		Linus Pauling (1901–1994)	United States	"for his research into the nature of the chemical bond and its application to the elucidation of the structure of complex substances"
1955		Vincent du Vigneaud (1901–1978)	United States	"for his work on biochemically important sulphur compounds, especially for the first synthesis of a polypeptide hormone"
1956		Sir Cyril Norman Hinshelwood (1897–1967)	United Kingdom	"for their researches into the mechanism of chemical reactions"
		Nikolay Nikolaevich Semenov (1896–1986)	Soviet Union	
1957		Lord (Alexander R.) Todd (1907–1997)	United Kingdom	"for his work on nucleotides and nucleotide co-enzymes"
1958		Frederick Sanger (1918–2013)	United Kingdom	"for his work on the structure of proteins, especially that of insulin"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1959		Jaroslav Heyrovský (1890–1967)	Czechoslovakia	"for his discovery and development of the polarographic methods of analysis"
1960		Willard Frank Libby (1908–1980)	United States	"for his method to use carbon-14 for age determination in archaeology, geology, geophysics, and other branches of science"
1961		Melvin Calvin (1911–1997)	United States	"for his research on the carbon dioxide assimilation in plants"
1962		Max Ferdinand Perutz (1914–2002)	United Kingdom	"for their studies of the structures of globular proteins"
		John Cowdery Kendrew (1917–1997)	United Kingdom	
1963		Karl Ziegler (1898–1973)	West Germany	"for their discoveries in the field of the chemistry and technology of high polymers"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Giulio Natta (1903–1979)	Italy	
1964		Dorothy Crowfoot Hodgkin (1910–1994)	United Kingdom	"for her determinations by X-ray techniques of the structures of important biochemical substances"
1965		Robert Burns Woodward (1917–1979)	United States	"for his outstanding achievements in the art of organic synthesis"
1966		Robert S. Mulliken (1896–1986)	United States	"for his fundamental work concerning chemical bonds and the electronic structure of molecules by the molecular orbital method"
1967		Manfred Eigen (1927–2019)	West Germany	"for their studies of extremely fast chemical reactions, effected by disturbing the equilibrium by means of very short pulses of energy"
		Ronald George Wreyford Norrish (1897–1978)	United Kingdom	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		George Porter (1920–2002)	United Kingdom	
1968		Lars Onsager (1903–1976)	United States Norway	"for the discovery of the reciprocal relations bearing his name, which are fundamental for the thermodynamics of irreversible processes"
1969		Derek H. R. Barton (1918–1998)	United Kingdom	"for their contributions to the development of the concept of conformation and its application in chemistry"
		Odd Hassel (1897–1981)	Norway	
1970		Luis F. Leloir (1906–1987)	Argentina	"for his discovery of sugar nucleotides and their role in the biosynthesis of carbohydrates"
1971		Gerhard Herzberg (1904–1999)	Canada West Germany	"for his contributions to the knowledge of electronic structure and geometry of molecules, particularly free radicals"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1972		Christian B. Anfinsen (1916–1995)	United States	"for his work on ribonuclease, especially concerning the connection between the amino acid sequence and the biologically active conformation"
		Stanford Moore (1913–1982)	United States	"for their contribution to the understanding of the connection between chemical structure and catalytic activity of the active centre of the ribonuclease molecule"
		William H. Stein (1911–1980)	United States	
1973		Ernst Otto Fischer (1918–2007)	West Germany	"for their pioneering work, performed independently, on the chemistry of the organometallic, so called sandwich compounds"
		Geoffrey Wilkinson (1921–1996)	United Kingdom	
1974		Paul J. Flory (1910–1985)	United States	"for his fundamental work, both theoretical and experimental, in the physical chemistry of macromolecules"
1975		John Warcup Cornforth (1917–2013)	Australia United Kingdom	"for his work on the stereochemistry of enzyme-catalyzed reactions"
		Vladimir Prelog (1906–1998)	Yugoslavia Switzerland	"for his research into the stereochemistry of organic molecules and reactions"

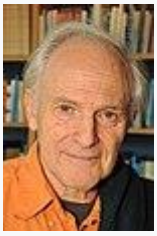
Year	Image	Laureate[A]	Country[B]	Rationale[C]
1976		William N. Lipscomb (1919–2011)	United States	"for his studies on the structure of boranes illuminating problems of chemical bonding"
1977		Ilya Prigogine (1917–2003)	Belgium	"for his contributions to non-equilibrium thermodynamics, particularly the theory of dissipative structures"
1978		Peter D. Mitchell (1920–1992)	United Kingdom	"for his contribution to the understanding of biological energy transfer through the formulation of the chemiosmotic theory"
1979		Herbert C. Brown (1912–2004)	United States	"for their development of the use of boron- and phosphorus-containing compounds, respectively, into important reagents in organic synthesis"
		Georg Wittig (1897–1987)	West Germany	
1980		Paul Berg (1926–2023)	United States	"for his fundamental studies of the biochemistry of nucleic acids, with particular regard to recombinant-DNA"
		Walter Gilbert (b. 1932)	United States	"for their contributions concerning the determination of base sequences in nucleic acids"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Frederick Sanger (1918–2013)	United Kingdom	
1981		Kenichi Fukui (1918–1998)	Japan	"for their theories, developed independently, concerning the course of chemical reactions"
		Roald Hoffmann (b. 1937)	United States Poland	
1982		Aaron Klug (1926–2018)	United Kingdom	"for his development of crystallographic electron microscopy and his structural elucidation of biologically important nucleic acid-protein complexes"
1983		Henry Taube (1915–2005)	United States	"for his work on the mechanisms of electron transfer reactions, especially in metal complexes"
1984		Robert Bruce Merrifield (1921–2006)	United States	"for his development of methodology for chemical synthesis on a solid matrix"
1985		Herbert A. Hauptman (1917–2011)	United States	"for their outstanding achievements in developing direct methods for the determination of crystal structures"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Jerome Karle (1918–2013)	United States	
1986		Dudley R. Herschbach (b. 1932)	United States	"for their contributions concerning the dynamics of chemical elementary processes"
		Yuan T. Lee (b. 1936)	United States Republic of China	
		John C. Polanyi (b. 1929)	Canada Hungary	
1987		Donald J. Cram (1919–2001)	United States	"for their development and use of molecules with structure-specific interactions of high selectivity"
		Jean-Marie Lehn (b. 1939)	France	
		Charles J. Pedersen (1904–1989)	United States	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1988		Johann Deisenhofer (b. 1943)	West Germany	"for their determination of the three-dimensional structure of a photosynthetic reaction centre"
		Robert Huber (b. 1937)	West Germany	
		Hartmut Michel (b. 1948)	West Germany	
1989		Sidney Altman (1939–2022)	Canada United States	"for their discovery of catalytic properties of RNA"
		Thomas Cech (b. 1947)	United States	
1990		Elias James Corey (b. 1928)	United States	"for his development of the theory and methodology of organic synthesis"
1991		Richard R. Ernst (1933–2021)	Switzerland	"for his contributions to the development of the methodology of high resolution nuclear magnetic resonance (NMR) spectroscopy"

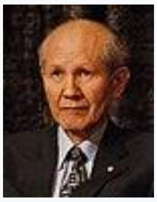
Year	Image	Laureate[A]	Country[B]	Rationale[C]
1992		Rudolph A. Marcus (b. 1923)	United States Canada	"for his contributions to the theory of electron transfer reactions in chemical systems"
1993		Kary B. Mullis (1944–2019)	United States	"for contributions to the developments of methods within DNA-based chemistry [...] for his invention of the polymerase chain reaction (PCR) method"
		Michael Smith (1932–2000)	Canada	"for contributions to the developments of methods within DNA-based chemistry [...] for his fundamental contributions to the establishment of oligonucleotide-based, site-directed mutagenesis and its development for protein studies"
1994		George A. Olah (1927–2017)	United States Hungary	"for his contribution to carbocation chemistry"
1995		Paul J. Crutzen (1933–2021)	Netherlands	"for their work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone"
		Mario J. Molina (1943–2020)	Mexico	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Frank Sherwood Rowland (1927–2012)	United States	
1996		Robert F. Curl Jr. (1933–2022)	United States	"for their discovery of fullerenes"
		Sir Harold W. Kroto (1939–2016)	United Kingdom	
		Richard E. Smalley (1943–2005)	United States	
1997		Paul D. Boyer (1918–2018)	United States	"for their elucidation of the enzymatic mechanism underlying the synthesis of adenosine triphosphate (ATP)"
		John E. Walker (b. 1941)	United Kingdom	
		Jens C. Skou (1918–2018)	Denmark	"for the first discovery of an ion-transporting enzyme, Na^+, K^+ -ATPase"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1998		Walter Kohn (1923–2016)	United States	"for his development of the density-functional theory"
		John A. Pople (1925–2004)	United Kingdom	"for his development of computational methods in quantum chemistry"
1999		Ahmed Zewail (1946–2016)	United States Egypt	"for his studies of the transition states of chemical reactions using femtosecond spectroscopy"
2000		Alan J. Heeger (b. 1936)	United States	"for their discovery and development of conductive polymers"
		Alan G. MacDiarmid (1927–2007)	United States New Zealand	
		Hideki Shirakawa (b. 1936)	Japan	
2001		William S. Knowles (1917–2012)	United States	"for their work on chirally catalysed hydrogenation reactions"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Ryōji Noyori (b. 1938)	Japan	
		K. Barry Sharpless (b. 1941)	United States	"for his work on chirally catalysed oxidation reactions"
2002		John B. Fenn (1917–2010)	United States	"for the development of methods for identification and structure analyses of biological macromolecules [...] for their development of soft desorption ionisation methods for mass spectrometric analyses of biological macromolecules"
		Koichi Tanaka (b. 1959)	Japan	
		Kurt Wüthrich (b. 1938)	Switzerland	"for the development of methods for identification and structure analyses of biological macromolecules [...] for his development of nuclear magnetic resonance spectroscopy for determining the three-dimensional structure of biological macromolecules in solution"
2003		Peter Agre (b. 1949)	United States	"for discoveries concerning channels in cell membranes [...] for the discovery of water channels"
		Roderick MacKinnon (b. 1956)	United States	"for discoveries concerning channels in cell membranes [...] for structural and mechanistic studies of ion channels"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2004		Aaron Ciechanover (b. 1947)	Israel	"for the discovery of ubiquitin-mediated protein degradation"
		Avram Hershko (b. 1937)	Israel	
		Irwin Rose (1926–2015)	United States	
2005		Yves Chauvin (1930–2015)	France	"for the development of the metathesis method in organic synthesis"
		Robert H. Grubbs (1942–2021)	United States	
		Richard R. Schrock (b. 1945)	United States	
2006		Roger D. Kornberg (b. 1947)	United States	"for his studies of the molecular basis of eukaryotic transcription"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2007		Gerhard Ertl (b. 1936)	Germany	"for his studies of chemical processes on solid surfaces"
2008		Osamu Shimomura (1928–2018)	Japan[108]	"for the discovery and development of the green fluorescent protein, GFP"
		Martin Chalfie (b. 1947)	United States	
		Roger Y. Tsien (1952–2016)	United States	
2009		Venkatraman Ramakrishnan (b. 1952)	United States India United Kingdom	"for studies of the structure and function of the ribosome"
		Thomas A. Steitz (1940–2018)	United States	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Ada E. Yonath (b. 1939)	Israel	
2010		Richard F. Heck (1931–2015)	United States	"for palladium-catalyzed cross couplings in organic synthesis"
		Ei-ichi Negishi (1935–2021)	Japan	
		Akira Suzuki (b. 1930)	Japan	
2011		Dan Shechtman (b. 1941)	Israel United States	"for the discovery of quasicrystals"
2012		Robert Lefkowitz (b. 1943)	United States	"for studies of G-protein-coupled receptors"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Brian Kobilka (b. 1955)	United States	
2013		Martin Karplus (b. 1930)	United States Austria	"for the development of multiscale models for complex chemical systems"
		Michael Levitt (b. 1947)	United States United Kingdom Israel[115]	
		Arieh Warshel (b. 1940)	United States Israel	
2014		Eric Betzig (b. 1960)	United States	"for the development of super-resolved fluorescence microscopy"
		Stefan W. Hell (b. 1962)	Germany Romania[117]	
		William E. Moerner (b. 1953)	United States	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2015		Tomas Lindahl (b. 1938)	Sweden United Kingdom	"for mechanistic studies of DNA repair"
		Paul L. Modrich (b. 1946)	United States	
		Aziz Sancar (b. 1946)	United States Turkey	
2016		Jean-Pierre Sauvage (b. 1944)	France	"for the design and synthesis of molecular machines"
		Fraser Stoddart (b. 1942)	United Kingdom United States	
		Ben Feringa (b. 1951)	Netherlands	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2017		Jacques Dubochet (b. 1942)	Switzerland	"for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution"
		Joachim Frank (b. 1940)	Germany United States[121]	
		Richard Henderson (b. 1945)	United Kingdom	
2018		Frances Arnold (b. 1956)	United States	"for the directed evolution of enzymes"
		George Smith (b. 1941)	United States	"for the phage display of peptides and antibodies"
		Sir Gregory Winter (b. 1951)	United Kingdom	
2019		John B. Goodenough (1922–2023)	United States	"for the development of lithium ion batteries"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		M. Stanley Whittingham (b. 1941)	United Kingdom United States	
		Akira Yoshino (b. 1948)	Japan	
2020		Emmanuelle Charpentier (b. 1968)	France	"for the development of a method for genome editing"
		Jennifer Doudna (b. 1964)	United States	
2021		Benjamin List (b. 1968)	Germany	"for the development of asymmetric organocatalysis"
		David W.C. MacMillan (b. 1968)	United Kingdom United States	
2022		Carolyn Bertozzi (b. 1966)	United States	"for the development of click chemistry and bioorthogonal chemistry"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Morten Meldal (b. 1954)	Denmark	
		K. Barry Sharpless (b. 1941)	United States	
2023		Moungi G. Bawendi (b. 1961)	United States France Tunisia	"for the discovery and synthesis of quantum dots"
		Louis E. Brus (b. 1943)	United States	
		Alexey Ekimov (b. 1945)	Russia	

(😊)*(😊)*(😊)*(😊)*(😊)

MEDICINE or PHYSIOLOGY

LIST OF LAUREATES

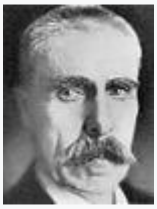
The Nobel Prize for Physiology or Medicine is awarded, according to the will of Swedish inventor and industrialist Alfred Bernhard Nobel, "to those who, during the preceding year, shall have conferred the greatest benefit on mankind" in the fields of physiology or medicine. It is conferred by the Karolinska Institute in Stockholm.

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1901		Emil von Behring (1854–1917)	Germany	"for his work on serum therapy, especially its application against diphtheria, by which he has opened a new road in the domain of medical science and thereby placed in the hands of the physician a victorious weapon against illness and deaths"
1902		Sir Ronald Ross (1857–1932)	United Kingdom	"for his work on malaria, by which he has shown how it enters the organism and thereby has laid the foundation for successful research on this disease and methods of combating it"
1903		Niels Ryberg Finsen (1860–1904)	Denmark	"[for] his contribution to the treatment of diseases, especially lupus vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science"
1904		Ivan Pavlov (1849–1936)	Russia	"in recognition of his work on the physiology of digestion, through which knowledge on vital aspects of the subject has been transformed and enlarged"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1905		Robert Koch (1843–1910)	Germany	"for his investigations and discoveries in relation to tuberculosis"
1906		Camillo Golgi (1843–1926)	Italy	"in recognition of their work on the structure of the nervous system"
		Santiago Ramón y Cajal (1852–1934)	Spain	
1907		Charles Louis Alphonse Laveran (1845–1922)	France	"in recognition of his work on the role played by protozoa in causing diseases"
1908		Élie Metchnikoff (1845–1916)	Russia	"in recognition of their work on immunity"
		Paul Ehrlich (1854–1915)	Germany	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1909		Emil Theodor Kocher (1841–1917)	Switzerland	"for his work on the physiology, pathology and surgery of the thyroid gland"
1910		Albrecht Kossel (1853–1927)	Germany	"in recognition of the contributions to our knowledge of cell chemistry made through his work on proteins, including the nucleic substances"
1911		Allvar Gullstrand (1862–1930)	Sweden	"for his work on the dioptrics of the eye"
1912		Alexis Carrel (1873–1944)	France	"[for] his work on vascular suture and the transplantation of blood vessels and organs"
1913		Charles Richet (1850–1935)	France	"[for] his work on anaphylaxis"
1914		Robert Bárány (1876–1936)	Austria-Hungary	"for his work on the physiology and pathology of the vestibular apparatus"
1915				

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1916				
1917				
1918				
1919		Jules Bordet (1870–1961)	Belgium	"for his discoveries relating to immunity"
1920		August Krogh (1874–1949)	Denmark	"for his discovery of the capillary motor regulating mechanism"
1921				
1922		Archibald Hill (1886–1977)	United Kingdom	"for his discovery relating to the production of heat in the muscle"
		Otto Fritz Meyerhof (1884–1951)	Germany	"for his discovery of the fixed relationship between the consumption of oxygen and the metabolism of lactic acid in the muscle"
1923		Sir Frederick Banting (1891–1941)	Canada	"for the discovery of insulin"

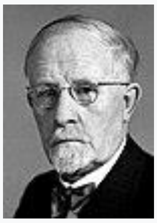
Year	Image	Laureate[A]	Country[B]	Rationale[C]
		John Macleod (1876–1935)	United Kingdom	
1924		Willem Einthoven (1860–1927)	Netherlands	"for the discovery of the mechanism of the electrocardiogram"
1925				
1926		Johannes Fibiger (1867–1928)	Denmark	"for his discovery of the Spiroptera carcinoma"
1927		Julius Wagner-Jauregg (1857–1940)	Austria	"for his discovery of the therapeutic value of malaria inoculation in the treatment of dementia paralytica"
1928		Charles Nicolle (1866–1936)	France	"for his work on typhus"
1929		Christiaan Eijkman (1868–1930)	Netherlands	"for his discovery of the antineuritic vitamin"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Sir Frederick Gowland Hopkins (1861–1947)	United Kingdom	"for his discovery of the growth-stimulating vitamins"
1930		Karl Landsteiner (1868–1943)	Austria	"for his discovery of human blood groups"
1931		Otto Heinrich Warburg (1883–1970)	Germany	"for his discovery of the nature and mode of action of the respiratory enzyme"
1932		Sir Charles Scott Sherrington (1857–1952)	United Kingdom	"for their discoveries regarding the functions of neurons"
		Edgar Adrian (1889–1977)		
1933		Thomas Hunt Morgan (1866–1945)	United States	"for his discoveries concerning the role played by the chromosome in heredity"

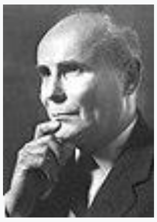
Year	Image	Laureate[A]	Country[B]	Rationale[C]
1934		George Whipple (1878–1976)	United States	"for their discoveries concerning liver therapy in cases of anaemia"
		George Minot (1885–1950)		
		William P. Murphy (1892–1987)		
1935		Hans Spemann (1869–1941)	Germany	"for his discovery of the organizer effect in embryonic development"
1936		Sir Henry Hallett Dale (1875–1968)	United Kingdom	"for their discoveries relating to chemical transmission of nerve impulses"
		Otto Loewi (1873–1961)	Austria	

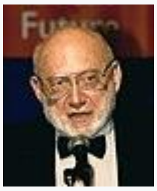
Year	Image	Laureate[A]	Country[B]	Rationale[C]
1937		Albert Szent-Györgyi (1893–1986)	Hungary	"for his discoveries in connection with the biological combustion processes, with special reference to vitamin C and the catalysis of fumaric acid"
1938		Corneille Heymans (1892–1968)	Belgium	"for the discovery of the role played by the sinus and aortic mechanisms in the regulation of respiration"
1939		Gerhard Domagk (1895–1964)	Germany	"for the discovery of the antibacterial effects of prontosil"
1940				
1941				
1942				
1943		Henrik Dam (1895–1976)	Denmark	"for his discovery of vitamin K"
		Edward Adelbert Doisy (1893–1986)	United States	"for his discovery of the chemical nature of vitamin K"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1944		Joseph Erlanger (1874–1965)	United States	"for their discoveries relating to the highly differentiated functions of single nerve fibres"
		Herbert Spencer Gasser (1888–1963)		
1945		Sir Alexander Fleming (1881–1955)	United Kingdom	"for the discovery of penicillin and its curative effect in various infectious diseases"
		Sir Ernst Boris Chain (1906–1979)		
		Howard Walter Florey (1898–1968)	Australia	
1946		Hermann Joseph Muller (1890–1967)	United States	"for the discovery of the production of mutations by means of X-ray irradiation"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1947		Carl Ferdinand Cori (1896–1984)	United States	"for their discovery of the course of the catalytic conversion of glycogen"
		Gerty Theresa Cori, née Radnitz (1896–1957)		
		Bernardo Alberto Houssay (1887–1971)	Argentina	"for his discovery of the part played by the hormone of the anterior pituitary lobe in the metabolism of sugar"
1948		Paul Hermann Müller (1899–1965)	Switzerland	"for his discovery of the high efficiency of DDT as a contact poison against several arthropods"
1949		Walter Rudolf Hess (1881–1973)	Switzerland	"for his discovery of the functional organization of the interbrain as a coordinator of the activities of the internal organs"
		António Caetano Egas Moniz (1874–1955)	Portugal	"for his discovery of the therapeutic value of leucotomy (lobotomy) in certain psychoses"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1950		Philip Showalter Hench (1896–1965)	United States	"for their discoveries relating to the hormones of the adrenal cortex, their structure and biological effects"
		Edward Calvin Kendall (1886–1972)		
		Tadeusz Reichstein (1897–1996)	Switzerland	
1951		Max Theiler (1899–1972)	South Africa United States	"for his discoveries concerning yellow fever and how to combat it"
1952		Selman Abraham Waksman (1888–1973)	United States	"for his discovery of streptomycin, the first antibiotic effective against tuberculosis"
1953		Sir Hans Adolf Krebs (1900–1981)	United Kingdom	"for his discovery of the citric acid cycle"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Fritz Albert Lipmann (1899–1986)	United States	"for his discovery of co-enzyme A and its importance for intermediary metabolism"
1954		John Franklin Enders (1897–1985)	United States	"for their discovery of the ability of poliomyelitis viruses to grow in cultures of various types of tissue"
		Frederick Chapman Robbins (1916–2003)		
		Thomas Huckle Weller (1915–2008)		
1955		Axel Hugo Theodor Theorell (1903–1982)	Sweden	"for his discoveries concerning the nature and mode of action of oxidation enzymes"
1956		André Frédéric Cournand (1895–1988)	United States	"for their discoveries concerning heart catheterization and pathological changes in the circulatory system"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Werner Forssmann (1904–1979)	🇩🇪 West Germany	
		Dickinson W. Richards (1895–1973)	🇺🇸 United States	
1957		Daniel Bovet (1907–1992)	🇮🇹 Italy	"for his discoveries relating to synthetic compounds that inhibit the action of certain body substances, and especially their action on the vascular system and the skeletal muscles"
1958		George Wells Beadle (1903–1989)	🇺🇸 United States	"for their discovery that genes act by regulating definite chemical events"
		Edward Lawrie Tatum (1909–1975)		
		Joshua Lederberg (1925–2008)		"for his discoveries concerning genetic recombination and the organization of the genetic material of bacteria"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1959		Arthur Kornberg (1918–2007)	United States	"for their discovery of the mechanisms in the biological synthesis of ribonucleic acid and deoxyribonucleic acid"
		Severo Ochoa (1905–1993)	United States	
1960		Sir Frank Macfarlane Burnet (1899–1985)	Australia	"for discovery of acquired immunological tolerance"
		Sir Peter Brian Medawar (1915–1987)	United Kingdom	
1961		Georg von Békésy (1899–1972)	Hungary	"for his discoveries of the physical mechanism of stimulation within the cochlea"
1962		Francis Harry Compton Crick (1916–2004)	United Kingdom	"for their discoveries concerning the molecular structure of nucleic acids and its significance for information transfer in living material"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		James Dewey Watson (b. 1928)	United States	
		Maurice Hugh Frederick Wilkins (1916–2004)	New Zealand United Kingdom	
1963		Sir John Carew Eccles (1903–1997)	Australia	"for their discoveries concerning the ionic mechanisms involved in excitation and inhibition in the peripheral and central portions of the nerve cell membrane"
		Sir Alan Lloyd Hodgkin (1914–1998)	United Kingdom	
		Sir Andrew Fielding Huxley (1917–2012)		
1964		Konrad Bloch (1912–2000)	United States	"for their discoveries concerning the mechanism and regulation of the cholesterol and fatty acid metabolism"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Feodor Lynen (1911–1979)	West Germany	
1965		François Jacob (1920–2013)	France	"for their discoveries concerning genetic control of enzyme and virus synthesis"
		André Lwoff (1902–1994)		
		Jacques Monod (1910–1976)		
1966		Peyton Rous (1879–1970)	United States	"for his discovery of tumour-inducing viruses"
		Charles Brenton Huggins (1901–1997)		"for his discoveries concerning hormonal treatment of prostatic cancer"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1967		Ragnar Granit (1900–1991)	Sweden/ Finland	"for their discoveries concerning the primary physiological and chemical visual processes in the eye"
		Haldan Keffer Hartline (1903–1983)	United States	
		George Wald (1906–1997)		
1968		Robert W. Holley (1922–1993)	United States	"for their interpretation of the genetic code and its function in protein synthesis"
		Har Gobind Khorana (1922–2011)		
		Marshall W. Nirenberg (1927–2010)		
1969		Max Delbrück (1906–1981)	United States	"for their discoveries concerning the replication mechanism and the genetic structure of viruses"
		Alfred D. Hershey (1908–1997)		

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Salvador E. Luria (1912–1991)		
1970		Julius Axelrod (1912–2004)	United States	"for their discoveries concerning the humoral transmitters in the nerve terminals and the mechanism for their storage, release and inactivation"
		Ulf von Euler (1905–1983)	Sweden	
		Sir Bernard Katz (1911–2003)	United Kingdom	
1971		Earl W. Sutherland Jr. (1915–1974)	United States	"for his discoveries concerning the mechanisms of the action of hormones"
1972		Gerald M. Edelman (1929–2014)	United States	"for their discoveries concerning the chemical structure of antibodies"
		Rodney R. Porter (1917–1985)	United Kingdom	
1973		Karl von Frisch (1886–1982)	West Germany	"for their discoveries concerning organization and elicitation of individual and social behaviour patterns"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Konrad Lorenz (1903–1989)	Austria	
		Nikolaas Tinbergen (1907–1988)	Netherlands	
1974		Albert Claude (1899–1983)	United States	"for their discoveries concerning the structural and functional organization of the cell"
		Christian de Duve (1917–2013)	Belgium	
		George E. Palade (1912–2008)	United States	
1975		David Baltimore (b. 1938)	United States	"for their discoveries concerning the interaction between tumour viruses and the genetic material of the cell"
		Renato Dulbecco (1914–2012)	United Kingdom United States	
		Howard Martin Temin (1934–1994)	United States	
1976		Baruch S. Blumberg (1925–2011)	United States	"for their discoveries concerning new mechanisms for the origin and dissemination of infectious diseases"

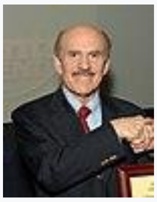
Year	Image	Laureate[A]	Country[B]	Rationale[C]
		D. Carleton Gajdusek (1923–2008)		
1977		Roger Guillemin (b. 1924)	United States	"for their discoveries concerning the peptide hormone production of the brain"
		Andrew V. Schally (b. 1926)		
		Rosalyn Yalow (1921–2011)		"for the development of radioimmunoassays of peptide hormones"
1978		Werner Arber (b. 1929)	Switzerland	"for the discovery of restriction enzymes and their application to problems of molecular genetics"
		Daniel Nathans (1928–1999)	United States	
		Hamilton O. Smith (b. 1931)		
1979		Allan M. Cormack (1924–1998)	United States	"for the development of computer assisted tomography"
		Sir Godfrey N. Hounsfield (1919–2004)	United Kingdom	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1980		Baruj Benacerraf (1920–2011)	Venezuela	"for their discoveries concerning genetically determined structures on the cell surface that regulate immunological reactions"
		Jean Dausset (1916–2009)	France	
		George D. Snell (1903–1996)	United States	
1981		Roger W. Sperry (1913–1994)	United States	"for his discoveries concerning the functional specialization of the cerebral hemispheres"
		David H. Hubel (1926–2013)	United States	"for their discoveries concerning information processing in the visual system"
		Torsten N. Wiesel (b. 1924)	Sweden United States	
1982		Sune K. Bergström (1916–2004)	Sweden	"for their discoveries concerning prostaglandins and related biologically active substances"
		Bengt I. Samuelsson (b. 1934)		
		Sir John R. Vane (1927–2004)	United Kingdom	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1983		Barbara McClintock (1902–1992)	United States	"for her discovery of mobile genetic elements"
1984		Niels K. Jerne (1911–1994)	Denmark Switzerland	"for theories concerning the specificity in development and control of the immune system and the discovery of the principle for production of monoclonal antibodies"
		Georges J. F. Köhler (1946–1995)	West Germany Switzerland	
		César Milstein (1927–2002)	Argentina United Kingdom	
1985		Michael S. Brown (b. 1941)	United States	"for their discoveries concerning the regulation of cholesterol metabolism"
		Joseph L. Goldstein (b. 1940)		
1986		Stanley Cohen (1922–2020)	United States	"for their discoveries of growth factors"
		Rita Levi-Montalcini (1909–2012)	Italy	
1987		Susumu Tonegawa (b. 1939)	Japan	"for his discovery of the genetic principle for generation of antibody diversity"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
1988		Sir James W. Black (1924–2010)	United Kingdom	"for their discoveries of important principles for drug treatment"
		Gertrude B. Elion (1918–1999)	United States	
		George H. Hitchings (1905–1998)		
1989		J. Michael Bishop (b. 1936)	United States	"for their discovery of the cellular origin of retroviral oncogenes"
		Harold E. Varmus (b. 1939)		
1990		Joseph E. Murray (1919–2012)	United States	"for their discoveries concerning organ and cell transplantation in the treatment of human disease"
		E. Donnall Thomas (1920–2012)		
1991		Erwin Neher (b. 1944)	Germany	"for their discoveries concerning the function of single ion channels in cells"
		Bert Sakmann (b. 1942)		
1992		Edmond H. Fischer (1920–2021)	Switzerland United States	"for their discoveries concerning reversible protein phosphorylation as a biological regulatory mechanism"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Edwin G. Krebs (1918–2009)	United States	
1993		Sir Richard J. Roberts (b. 1943)	United Kingdom	"for their discoveries of split genes"
		Phillip A. Sharp (b. 1944)	United States	
1994		Alfred G. Gilman (1941–2015)	United States	"for their discovery of G-proteins and the role of these proteins in signal transduction in cells"
		Martin Rodbell (1925–1998)		
1995		Edward B. Lewis (1918–2004)	United States	"for their discoveries concerning the genetic control of early embryonic development"
		Christiane Nüsslein-Volhard (b. 1942)	Germany	
		Eric F. Wieschaus (b. 1947)	United States	
1996		Peter C. Doherty (b. 1940)	Australia	"for their discoveries concerning the specificity of the cell mediated immune defence"
		Rolf M. Zinkernagel (b. 1944)	Switzerland	
1997		Stanley B. Prusiner (b. 1942)	United States	"for his discovery of Prions - a new biological principle of infection"
1998		Robert F. Furchgott (1916–2009)	United States	"for their discoveries concerning nitric oxide as a

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Louis J. Ignarro (b. 1941)		signalling molecule in the cardiovascular system"
		Ferid Murad (1936–2023)		
1999		Günter Blobel (1936–2018)	United States	"for the discovery that proteins have intrinsic signals that govern their transport and localization in the cell"
2000		Arvid Carlsson (1923–2018)	Sweden	"for their discoveries concerning signal transduction in the nervous system"
		Paul Greengard (1925–2019)	United States	
		Eric R. Kandel (b. 1929)		
2001		Leland H. Hartwell (b. 1939)	United States	"for their discoveries of key regulators of the cell cycle"
		Sir Tim Hunt (b. 1943)	United Kingdom	
		Sir Paul M. Nurse (b. 1949)		
2002		Sydney Brenner (1927–2019)	South Africa	"for their discoveries concerning 'genetic regulation of organ development and programmed cell death'"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		H. Robert Horvitz (b. 1947)	United States	
		Sir John E. Sulston (1942–2018)	United Kingdom	
2003		Paul Lauterbur (1929–2007)	United States	"for their discoveries concerning magnetic resonance imaging"
		Sir Peter Mansfield (1933–2017)	United Kingdom	
2004		Richard Axel (b. 1946)	United States	"for their discoveries of odorant receptors and the organization of the olfactory system"
		Linda B. Buck (b. 1947)		
2005		Barry J. Marshall (b. 1951)	Australia	"for their discovery of the bacterium *Helicobacter pylori* and its role in gastritis and peptic ulcer disease"
		J. Robin Warren (b. 1937)		
2006		Andrew Z. Fire (b. 1959)	United States	"for their discovery of RNA interference - gene silencing by double-stranded RNA"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Craig C. Mello (b. 1960)		
2007		Mario R. Capecchi (b. 1937)	United States	"for their discoveries of principles for introducing specific gene modifications in mice by the use of embryonic stem cells."
		Sir Martin J. Evans (b. 1941)	United Kingdom	
		Oliver Smithies (1925–2017)	United States	
2008		Harald zur Hausen (1936–2023)	Germany	"for his discovery of human papilloma viruses causing cervical cancer"
		Françoise Barré-Sinoussi (b. 1947)	France	"for their discovery of human immunodeficiency virus"
		Luc Montagnier (1932–2022)		
2009		Elizabeth H. Blackburn (b. 1948)	United States	"for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase"
		Carol W. Greider (b. 1961)		

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Jack W. Szostak (b. 1952)		
2010		Sir Robert G. Edwards (1925–2013)	United Kingdom	"for the development of in vitro fertilization"
2011		Bruce A. Beutler (b. 1957)	United States	"for their discoveries concerning the activation of innate immunity"
		Jules A. Hoffmann (b. 1941)	France	
		Ralph M. Steinman (1943–2011)	Canada	"for his discovery of the dendritic cell and its role in adaptive immunity" (awarded posthumously)[110][111]
2012		Sir John B. Gurdon (b. 1933)	United Kingdom	"for the discovery that mature cells can be reprogrammed to become pluripotent"
		Shinya Yamanaka (b. 1962)	Japan	
2013		James E. Rothman (b. 1950)	United States	"for their discoveries of machinery regulating vesicle traffic, a major transport system in our cells"
		Randy W. Schekman (b. 1948)		
		Thomas C. Südhof (b. 1955)	United States	

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2014		John O'Keefe (b. 1939)	United Kingdom	"for their discoveries of cells that constitute a positioning system in the brain"
		May-Britt Moser (b. 1963)	Norway	
		Edvard I. Moser (b. 1962)		
2015		William C. Campbell (b. 1930)	United States	"for their discoveries concerning a novel therapy against infections caused by roundworm parasites"
		Satoshi Ōmura (b. 1935)	Japan	
		Tu Youyou (b. 1930)	China	"for her discoveries concerning a novel therapy against malaria"
2016		Yoshinori Ohsumi (b. 1945)	Japan	"for his discoveries of mechanisms for autophagy"
2017		Jeffrey C. Hall (b. 1945)	United States	"for their discoveries of molecular mechanisms controlling the circadian rhythm"
		Michael Rosbash (b. 1944)		
		Michael W. Young (b. 1949)		

Year	Image	Laureate[A]	Country[B]	Rationale[C]
2018		James P. Allison (b. 1948)	United States	"for their discovery of cancer therapy by inhibition of negative immune regulation"
		Tasuku Honjo (b. 1942)	Japan	
2019		William Kaelin Jr. (b. 1957)	United States	"for their discoveries of how cells sense and adapt to oxygen availability"
		Peter J. Ratcliffe (b. 1954)	United Kingdom	
		Gregg L. Semenza (b. 1956)	United States	
2020		Harvey J. Alter (b. 1935)	United States	"for the discovery of Hepatitis C virus"
		Michael Houghton (b. 1949)	United Kingdom	
		Charles M. Rice (b. 1952)	United States	
2021		David Julius (b. 1955)	United States	"for the discovery of receptors for temperature and touch"

Year	Image	Laureate[A]	Country[B]	Rationale[C]
		Ardem Patapoutian (b. 1967)	United States	
2022		Svante Pääbo (b. 1955)	Sweden	"for his discoveries concerning the genomes of extinct hominins and human evolution"
2023		Katalin Karikó (b. 1955)	Hungary United States	"for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19"
		Drew Weissman (b. 1959)	United States	

(😊)(😊)(😊)(😊)(😊)

LITERATURE

LIST OF LAUREATES

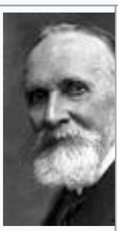
The Nobel Prize in Literature has been awarded 116 times
to 120 Nobel Prize laureates between 1901 and 2023.

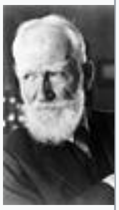
Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1901		**Sully Prudhomme** (1839–1907)	France	French	62	"in special recognition of his poetic composition, which gives evidence of lofty idealism, artistic perfection and a rare combination of the qualities of both heart and intellect"[17]	poetry, essay
1902		**Theodor Mommsen** (1817–1903)	Germany	German	85	"the greatest living master of the art of historical writing, with special reference to his monumental work *A History of Rome*"[18]	history, law
1903		**Bjørnstjerne Bjørnson** (1832–1910)	Norway	Norwegian	71	"as a tribute to his noble, magnificent and versatile poetry, which has always been distinguished by both the freshness of its inspiration and the rare purity of its spirit"[19]	poetry, novel, drama

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1904		**Frédéric Mistral** (1830–1914)	France	Provençal	74	"in recognition of the fresh originality and true inspiration of his poetic production, which faithfully reflects the natural scenery and native spirit of his people, and, in addition, his significant work as a Provençal philologist"[20]	poetry, philology
		José Echegaray (1832–1916)	Spain	Spanish	72	"in recognition of the numerous and brilliant compositions which, in an individual and original manner, have revived the great traditions of the Spanish drama"[20]	drama
1905		**Henryk Sienkiewicz** (1846–1916)	Poland (Russian Empire)	Polish	59	"because of his outstanding merits as an epic writer"[21]	novel
1906		**Giosuè Carducci** (1835–1907)	Italy	Italian	71	"not only in consideration of his deep learning and critical research, but above all as a tribute to the creative energy, freshness of style, and lyrical force which characterize his poetic masterpieces"[22]	poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1907		**Rudyard Kipling** (1865–1936)	United Kingdom	English	41	"in consideration of the power of observation, originality of imagination, virility of ideas and remarkable talent for narration that characterize the creations of this world-famous author"[23]	novel, short story, poetry
1908		**Rudolf Christoph Eucken** (1846–1926)	Germany	German	62	"in recognition of his earnest search for truth, his penetrating power of thought, his wide range of vision, and the warmth and strength in presentation with which in his numerous works he has vindicated and developed an idealistic philosophy of life"[24]	philosophy
1909		**Selma Lagerlöf** (1858–1940)	Sweden	Swedish	51	"in appreciation of the lofty idealism, vivid imagination and spiritual perception that characterize her writings"[25]	novel, short story
1910		**Paul von Heyse** (1830–1914)	Germany	German	80	"as a tribute to the consummate artistry, permeated with idealism, which he has demonstrated during his long productive career as a	poetry, drama, novel, short story

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						lyric poet, dramatist, novelist and writer of world-renowned short stories"[26]	
1911		**Maurice Maeterlinck** (1862–1949)	Belgium	French	49	"in appreciation of his many-sided literary activities, and especially of his dramatic works, which are distinguished by a wealth of imagination and by a poetic fancy, which reveals, sometimes in the guise of a fairy tale, a deep inspiration, while in a mysterious way they appeal to the readers' own feelings and stimulate their imaginations"[27]	drama, poetry, essay
1912		**Gerhart Hauptmann** (1862–1946)	Germany	German	50	"primarily in recognition of his fruitful, varied and outstanding production in the realm of dramatic art"[28]	drama, novel
1913		**Rabindranath Tagore** (1861–1941)	British India (British Empire)	Bengali and English	52	"because of his profoundly sensitive, fresh and beautiful verse, by which, with consummate skill, he has made his poetic thought, expressed in his own English words,	poetry, novel, drama, short story, essay, translation

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						a part of the literature of the West"[29]	
1914	*Not awarded*						
1915		**Romain Rolland** (1866–1944)	France	French	49	"as a tribute to the lofty idealism of his literary production and to the sympathy and love of truth with which he has described different types of human beings"[13]	novel
1916		**Verner von Heidenstam** (1859–1940)	Sweden	Swedish	56	"in recognition of his significance as the leading representative of a new era in our literature"[30]	poetry, novel
1917		**Karl Adolph Gjellerup** (1857–1919)	Denmark	Danish and German	60	"for his varied and rich poetry, which is inspired by lofty ideals"[31]	poetry
		Henrik Pontoppidan (1857–1943)	Denmark	Danish	60	"for his authentic descriptions of present-day life in Denmark"[31]	novel
1918	*Not awarded*						
1919		**Carl Spitteler** (1845–1924)	Switzerland	German	74	"in special appreciation of his epic, *Olympian Spring*"[32]	poetry
1920		**Knut Hamsun** (1859–1952)	Norway	Norwegian	61	"for his monumental work, *Growth of the Soil*"[33]	novel

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1921		**Anatole France** (1844–1924)	France	French	77	"in recognition of his brilliant literary achievements, characterized as they are by a nobility of style, a profound human sympathy, grace, and a true Gallic temperament"[34]	novel, poetry
1922		**Jacinto Benavente** (1866–1954)	Spain	Spanish	56	"for the happy manner in which he has continued the illustrious traditions of the Spanish drama"[35]	drama
1923		**William Butler Yeats** (1865–1939)	Ireland	English	58	"for his always inspired poetry, which in a highly artistic form gives expression to the spirit of a whole nation"[36]	poetry
1924		**Władysław Reymont** (1867–1925)	Poland	Polish	57	"for his great national epic, *The Peasants*"[37]	novel
1925		**George Bernard Shaw** (1856–1950)	United Kingdom Ireland[38]	English	69	"for his work which is marked by both idealism and humanity, its stimulating satire often being infused with a singular poetic beauty"[39]	drama, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1926		**Grazia Deledda** (1871–1936)	Italy	Italian	55	"for her idealistically inspired writings, which with plastic clarity picture the life on her native island and with depth and sympathy deal with human problems in general"[40]	poetry, novel
1927		**Henri Bergson** (1859–1941)	France	French	68	"in recognition of his rich and vitalizing ideas and the brilliant skill with which they have been presented"[41]	philosophy
1928		**Sigrid Undset** (1882–1949)	Norway Denmark	Norwegian	46	"principally for her powerful descriptions of Northern life during the Middle Ages"[42]	novel
1929		**Thomas Mann** (1875–1955)	Germany	German	54	"principally for his great novel, *Buddenbrooks*, which has won steadily increased recognition as one of the classic works of contemporary literature"[43]	novel, short story, essay
1930		**Sinclair Lewis** (1885–1951)	United States	English	45	"for his vigorous and graphic art of description and his ability to create, with wit and humour, new types of characters"[44]	novel, short story, drama

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1931		**Erik Axel Karlfeldt** (1864–1931)	Sweden	Swedish	67	"The poetry of Erik Axel Karlfeldt"[45]	poetry
1932		**John Galsworthy** (1867–1933)	United Kingdom	English	65	"for his distinguished art of narration, which takes its highest form in *The Forsyte Saga*"[46]	novel
1933		**Ivan Bunin** (1870–1953)	Stateless (born in Russian Empire)	Russian	63	"for the strict artistry with which he has carried on the classical Russian traditions in prose writing"[47]	short story, poetry, novel
1934		**Luigi Pirandello** (1867–1936)	Italy	Italian	67	"for his bold and ingenious revival of dramatic and scenic art"[48]	drama, novel, short story
1935	*Not awarded*						
1936		**Eugene O'Neill** (1888–1953)	United States	English	48	"for the power, honesty and deep-felt emotions of his dramatic works, which embody an original concept of tragedy"[49]	drama
1937		**Roger Martin du Gard** (1881–1958)	France	French	56	"for the artistic power and truth with which he has depicted human conflict as well as some fundamental aspects of contemporary life in his novel cycle *Les Thibault*"[50]	novel

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1938		**Pearl Buck** (1892–1973)	United States	English	46	"for her rich and truly epic descriptions of peasant life in China and for her biographical masterpieces"[51]	novel, biography
1939		**Frans Eemil Sillanpää** (1888–1964)	Finland	Finnish	51	"for his deep understanding of his country's peasantry and the exquisite art with which he has portrayed their way of life and their relationship with Nature"[52]	novel
1940	*Not awarded*						
1941	*Not awarded*						
1942	*Not awarded*						
1943	*Not awarded*						
1944		**Johannes Vilhelm Jensen** (1873–1950)	Denmark	Danish	71	"for the rare strength and fertility of his poetic imagination with which is combined an intellectual curiosity of wide scope and a bold, freshly creative style"[53]	novel, short story
1945		**Gabriela Mistral** (1889–1957)	Chile	Spanish	56	"for her lyric poetry, which inspired by powerful emotions, has made her name a symbol of the idealistic aspirations of the entire Latin American world"[54]	poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1946		**Hermann Hesse** (1877–1962)	Germany Switzerland	German	69	"for his inspired writings, which while growing in boldness and penetration, exemplify the classical humanitarian ideals and high qualities of style"[55]	novel, poetry
1947		**André Gide** (1869–1951)	France	French	78	"for his comprehensive and artistically significant writings, in which human problems and conditions have been presented with a fearless love of truth and keen psychological insight"[56]	novel, essay, drama, memoir
1948		**Thomas Stearns Eliot** (1888–1965)	United Kingdom (born in the United States)	English	60	"for his outstanding, pioneer contribution to present-day poetry"[57]	poetry, essay, drama
1949		**William Faulkner** (1897–1962)	United States	English	52	"for his powerful and artistically unique contribution to the modern American novel"[14]	novel, short story
1950		**Bertrand Russell** (1872–1970)	United Kingdom	English	78	"in recognition of his varied and significant writings in which he champions humanitarian ideals and freedom of thought"[58]	philosophy, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1951		**Pär Lagerkvist** (1891–1974)	Sweden	Swedish	60	"for the artistic vigour and true independence of mind with which he endeavours in his poetry to find answers to the eternal questions confronting mankind"[59]	poetry, novel, short story, drama
1952		**François Mauriac** (1885–1970)	France	French	67	"for the deep spiritual insight and the artistic intensity with which he has in his novels penetrated the drama of human life"[60]	novel, short story
1953		**Winston Churchill** (1874–1965)	United Kingdom	English	79	"for his mastery of historical and biographical description as well as for brilliant oratory in defending exalted human values"[61]	history, essay, memoir
1954		**Ernest Hemingway** (1899–1961)	United States	English	55	"for his mastery of the art of narrative, most recently demonstrated in *The Old Man and the Sea*, and for the influence that he has exerted on contemporary style"[62]	novel, short story, screenplay
1955		**Halldór Laxness** (1902–1998)	Iceland	Icelandic	53	"for his vivid epic power, which has renewed the great narrative art of Iceland"[63]	novel, short story, drama, poetry

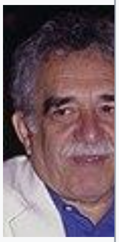
Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1956		**Juan Ramón Jiménez** (1881–1958)	Spain	Spanish	75	"for his lyrical poetry, which in Spanish language constitutes an example of high spirit and artistical purity"[64]	poetry, novel
1957		**Albert Camus** (1913–1960)	France (born in Algeria)	French	44	"for his important literary production, which with clear-sighted earnestness illuminates the problems of the human conscience in our times"[65]	novel, short story, drama, philosophy, essay
1958		**Boris Pasternak** (1890–1960)	Soviet Union	Russian	70	"for his important achievement both in contemporary lyrical poetry and in the field of the great Russian epic tradition"[66]	novel, poetry, translation
1959		**Salvatore Quasimodo** (1901–1968)	Italy	Italian	58	"for his lyrical poetry, which with classical fire expresses the tragic experience of life in our own times"[67]	poetry
1960		**Saint-John Perse** (1887–1975)	France (born in Guadeloupe)	French	73	"for the soaring flight and the evocative imagery of his poetry, which in a visionary fashion reflects the conditions of our time"[68]	poetry
1961		**Ivo Andrić** (1892–1975)	Yugoslavia (born in Austria-Hungary)	Serbo-Croatian	69	"for the epic force with which he has traced themes and depicted human destinies	novel, short story

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						drawn from the history of his country"[69]	
1962		**John Steinbeck** (1902–1968)	United States	English	60	"for his realistic and imaginative writings, combining as they do sympathetic humour and keen social perception"[70]	novel, short story, screenplay
1963		**Giorgos Seferis** (1900–1971)	Greece (born in the Ottoman Empire)	Greek	63	"for his eminent lyrical writing, inspired by a deep feeling for the Hellenic world of culture"[71]	poetry, essay, memoir
1964		**Jean-Paul Sartre** (1905–1980)	France	French	59	"for his work, which rich in ideas and filled with the spirit of freedom and the quest for truth, has exerted a far-reaching influence on our age"[72]	philosophy, novel, drama, essay, short story, screenplay
1965		**Mikhail Sholokhov** (1905–1984)	Soviet Union	Russian	60	"for the artistic power and integrity with which, in his epic of the Don, he has given expression to a historic phase in the life of the Russian people"[73]	novel
1966		**Shmuel Yosef Agnon** (1888–1970)	Israel (born in Austria-Hungary)	Hebrew	79	"for his profoundly characteristic narrative art with motifs from the life of the Jewish people"[74]	novel, short story

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
		Nelly Sachs (1891–1970)	Germany Sweden	German	75	"for her outstanding lyrical and dramatic writing, which interprets Israel's destiny with touching strength"[74]	poetry, drama
1967		**Miguel Ángel Asturias** (1899–1974)	Guatemala	Spanish	68	"for his vivid literary achievement, deep-rooted in the national traits and traditions of Indian peoples of Latin America"[75]	novel, poetry
1968		**Yasunari Kawabata** (1899–1972)	Japan	Japanese	69	"for his narrative mastery, which with great sensibility expresses the essence of the Japanese mind"[76]	novel, short story
1969		**Samuel Beckett** (1906–1989)	Ireland	French and English	63	"for his writing, which – in new forms for the novel and drama – in the destitution of modern man acquires its elevation"[77]	novel, drama, poetry
1970		**Aleksandr Solzhenitsyn** (1918–2008)	Soviet Union	Russian	52	"for the ethical force with which he has pursued the indispensable traditions of Russian literature"[78]	novel, essay, short story
1971		**Pablo Neruda** (1904–1973)	Chile	Spanish	67	"for a poetry that with the action of an elemental force brings alive a continent's destiny and dreams"[79]	poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1972		**Heinrich Böll** (1917–1985)	West Germany	German	55	"for his writing, which through its combination of a broad perspective on his time and a sensitive skill in characterization has contributed to a renewal of German literature"[80]	novel, short story
1973		**Patrick White** (1912–1990)	Australia (born in the United Kingdom)	English	61	"for an epic and psychological narrative art, which has introduced a new continent into literature"[81]	novel, short story, drama
1974		**Eyvind Johnson** (1900–1976)	Sweden	Swedish	74	"for a narrative art, farseeing in lands and ages, in the service of freedom"[82]	novel
		Harry Martinson (1904–1978)	Sweden	Swedish	70	"for writings that catch the dewdrop and reflect the cosmos"[82]	poetry, novel, drama
1975		**Eugenio Montale** (1896–1981)	Italy	Italian	79	"for his distinctive poetry, which, with great artistic sensitivity, has interpreted human values under the sign of an outlook on life with no illusions"[83]	poetry
1976		**Saul Bellow** (1915–2005)	United States (born in Canada)	English	61	"for the human understanding and subtle analysis of contemporary culture that are	novel, short story

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						combined in his work"[84]	
1977		**Vicente Aleixandre** (1898–1984)	Spain	Spanish	79	"for a creative poetic writing, which illuminates man's condition in the cosmos and in present-day society, at the same time representing the great renewal of the traditions of Spanish poetry between the wars"[85]	poetry
1978		**Isaac Bashevis Singer** (1902–1991)	United States Poland	Yiddish	76	"for his impassioned narrative art which, with roots in a Polish-Jewish cultural tradition, brings universal human conditions to life"[86]	novel, short story, memoir
1979		**Odysseas Elytis** (1911–1996)	Greece	Greek	68	"for his poetry, which, against the background of Greek tradition, depicts with sensuous strength and intellectual clear-sightedness modern man's struggle for freedom and creativeness"[87]	poetry, essay
1980		**Czesław Miłosz** (1911–2004)	Poland (born in Russian Empire)	Polish	69	"who with uncompromising clear-sightedness voices man's exposed condition in a	poetry, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						world of severe conflicts"[88]	
1981		**Elias Canetti** (1905–1994)	United Kingdom Bulgaria	German	76	"for writings marked by a broad outlook, a wealth of ideas and artistic power"[89]	novel, drama, memoirs, essay
1982		**Gabriel García Márquez** (1927–2014)	Colombia	Spanish	55	"for his novels and short stories, in which the fantastic and the realistic are combined in a richly composed world of imagination, reflecting a continent's life and conflicts"[90]	novel, short story, screenplay
1983		**William Golding** (1911–1993)	United Kingdom	English	72	"for his novels, which with the perspicuity of realistic narrative art and the diversity and universality of myth, illuminate the human condition in the world of today"[91]	novel, poetry, drama
1984		**Jaroslav Seifert** (1901–1986)	Czechoslovakia (born in Austria-Hungary)	Czech	83	"for his poetry, which endowed with freshness, and rich inventiveness provides a liberating image of the indomitable spirit and versatility of man"[92]	poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1985		**Claude Simon** (1913–2005)	France (born in French Madagascar)	French	72	"who in his novel combines the poet's and the painter's creativeness with a deepened awareness of time in the depiction of the human condition"[93]	novel, essay
1986		**Wole Soyinka** (b. 1934)	Nigeria	English	52	"who in a wide cultural perspective and with poetic overtones fashions the drama of existence"[94]	drama, novel, poetry, screenplay
1987		**Joseph Brodsky** (1940–1996)	United States Soviet Union	Russian and English	47	"for an all-embracing authorship, imbued with clarity of thought and poetic intensity"[95]	poetry, essay
1988		**Naguib Mahfouz** (1911–2006)	Egypt	Arabic	77	"who, through works rich in nuance – now clear-sightedly realistic, now evocatively ambiguous – has formed an Arabian narrative art that applies to all mankind"[96]	novel, short story
1989		**Camilo José Cela** (1916–2002)	Spain	Spanish	73	"for a rich and intensive prose, which with restrained compassion forms a challenging vision of man's vulnerability"[97]	novel, short story, essay, poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1990		**Octavio Paz** (1914–1998)	Mexico	Spanish	76	"for impassioned writing with wide horizons, characterized by sensuous intelligence and humanistic integrity"[98]	poetry, essay
1991		**Nadine Gordimer** (1923–2014)	South Africa	English	68	"who through her magnificent epic writing has – in the words of Alfred Nobel – been of very great benefit to humanity"[99]	novel, short story, essay, drama
1992		**Derek Walcott** (1930–2017)	Saint Lucia	English	62	"for a poetic oeuvre of great luminosity, sustained by a historical vision, the outcome of a multicultural commitment"[100]	poetry, drama
1993		**Toni Morrison** (1931–2019)	United States	English	62	"who in novels characterized by visionary force and poetic import, gives life to an essential aspect of American reality"[101]	novel, essay
1994		**Kenzaburō Ōe** (1935–2023)	Japan	Japanese	59	"who with poetic force creates an imagined world, where life and myth condense to form a disconcerting picture of the human predicament today"[102]	novel, short story, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
1995		**Seamus Heaney** (1939–2013)	Ireland	English	56	"for works of lyrical beauty and ethical depth, which exalt everyday miracles and the living past"[103]	poetry, drama, translation, essay
1996		**Wisława Szymborska** (1923–2012)	Poland	Polish	73	"for poetry that with ironic precision allows the historical and biological context to come to light in fragments of human reality"[104]	poetry, essay, translation
1997		**Dario Fo** (1926–2016)	Italy	Italian	71	"who emulates the jesters of the Middle Ages in scourging authority and upholding the dignity of the downtrodden"[105]	drama, song lyrics
1998		**José Saramago** (1922–2010)	Portugal	Portuguese	76	"who with parables sustained by imagination, compassion and irony continually enables us once again to apprehend an elusory reality"[106]	novel, drama, poetry
1999		**Günter Grass** (1927–2015)	Germany (born in Free City of Danzig)	German	72	"whose frolicsome black fables portray the forgotten face of history"[107]	novel, drama, poetry, essay
2000		**Gao Xingjian** (b. 1940)	France China	Chinese	60	"for an oeuvre of universal validity, bitter insights and linguistic ingenuity, which has	novel, drama, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						opened new paths for the Chinese novel and drama"[108]	
2001		**Vidiadhar Surajprasad Naipaul** (1932–2018)	United Kingdom Trinidad and Tobago	English	69	"for having united perceptive narrative and incorruptible scrutiny in works that compel us to see the presence of suppressed histories"[109]	novel, essay
2002		**Imre Kertész** (1929–2016)	Hungary	Hungarian	73	"for writing that upholds the fragile experience of the individual against the barbaric arbitrariness of history"[110]	novel
2003		**John Maxwell Coetzee** (b. 1940)	South Africa	English	63	"who in innumerable guises portrays the surprising involvement of the outsider"[111]	novel, essay, translation
2004		**Elfriede Jelinek** (b. 1946)	Austria	German	58	"for her musical flow of voices and counter-voices in novels and plays that with extraordinary linguistic zeal reveal the absurdity of society's clichés and their subjugating power"[112]	novel, drama
2005		**Harold Pinter** (1930–2008)	United Kingdom	English	75	"who in his plays uncovers the precipice under everyday prattle and forces entry	drama, screenplay, poetry

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						into oppression's closed rooms"[113]	
2006		**Orhan Pamuk** (b. 1952)	Turkey	Turkish	54	"who in the quest for the melancholic soul of his native city has discovered new symbols for the clash and interlacing of cultures"[114]	novel, screenplay, autobiography, essay
2007		**Doris Lessing** (1919–2013)	United Kingdom (born in Iran)	English	88	"that epicist of the female experience, who with scepticism, fire and visionary power has subjected a divided civilisation to scrutiny"[115]	novel, short story, memoir/autobiography, drama, poetry, essay
2008		**Jean-Marie Gustave Le Clézio** (b. 1940)	France Mauritius	French	68	"author of new departures, poetic adventure and sensual ecstasy, explorer of a humanity beyond and below the reigning civilization"[116]	novel, short story, essay, translation
2009		**Herta Müller** (b. 1953)	Germany Romania	German	56	"who, with the concentration of poetry and the frankness of prose, depicts the landscape of the dispossessed"[117]	novel, short story, poetry, essay
2010		**Mario Vargas Llosa** (b. 1936)	Peru Spain	Spanish	74	"for his cartography of structures of power and his trenchant images of the individual's resistance,	novel, short story, essay, drama, memoir

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
						revolt, and defeat"[118]	
2011		**Tomas Tranströmer** (1931–2015)	Sweden	Swedish	80	"because, through his condensed, translucent images, he gives us fresh access to reality"[119]	poetry, translation
2012		**Mo Yan** (b. 1955)	China	Chinese	57	"who with hallucinatory realism merges folk tales, history and the contemporary"[120]	novel, short story
2013		**Alice Munro** (b. 1931)	Canada	English	82	"master of the contemporary short story"[121]	short story
2014		**Patrick Modiano** (b. 1945)	France	French	69	"for the art of memory with which he has evoked the most ungraspable human destinies and uncovered the life-world of the Occupation"[122]	novel, screenplay
2015		**Svetlana Alexievich** (b. 1948)	Belarus (born in the Soviet Union)	Russian	67	"for her polyphonic writings, a monument to suffering and courage in our time"[123]	history, essay
2016		**Bob Dylan** (b. 1941)	United States	English	75	"for having created new poetic expressions within the great American song tradition"[124]	poetry, song lyrics

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
2017		**Kazuo Ishiguro** (b. 1954)	United Kingdom (born in Japan)	English	63	"who, in novels of great emotional force, has uncovered the abyss beneath our illusory sense of connection with the world"[125]	novel, screenplay, short story
2018		**Olga Tokarczuk** (b. 1962)	Poland	Polish	56	"for a narrative imagination that with encyclopedic passion represents the crossing of boundaries as a form of life"[126]	novel, short story, poetry, essay, screenplay
2019		**Peter Handke** (b. 1942)	Austria	German	77	"for an influential work that with linguistic ingenuity has explored the periphery and the specificity of human experience"[127]	novel, short story, drama, essay, translation, screenplay
2020		**Louise Glück** (1943–2023)	United States	English	77	"for her unmistakable poetic voice that with austere beauty makes individual existence universal"[128]	poetry, essay
2021		**Abdulrazak Gurnah** (b. 1948)	Tanzania United Kingdom (born in the Sultanate of Zanzibar)	English	72	"for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents"[129]	novel, short story, essay

Year	Picture	Laureate	Country	Language(s)	Age awarded	Citation	Genre(s)
2022		**Annie Ernaux** (b. 1940)	France	French	82	"for the courage and clinical acuity with which she uncovers the roots, estrangements and collective restraints of personal memory"[130]	memoir, novel
2023		**Jon Fosse** (b. 1959)	Norway	Norwegian (Nynorsk)	64	"for his innovative plays and prose which give voice to the unsayable"[131]	drama, novel, poetry, essay

The 120 Nobel Laureates in Literature from 1901 to 2023 are from the following countries:

Country	Number
France	16
United States	13
United Kingdom	13
Germany	9
Sweden	8
Poland	6
Spain	6
Italy	6
Russia/ Soviet Union	5

Country	Number
Ireland	4
Norway	4
Denmark	3
Austria	2
Chile	2
Greece	2
Japan	2
South Africa	2
Switzerland	2
China	2
Australia	1
Belarus	1
Belgium	1
Bulgaria	1
Canada	1
Colombia	1
Czechoslovakia	1

Country	Number
Egypt	1
Finland	1
Guatemala	1
Hungary	1
Iceland	1
India	1
Israel	1
Mauritius	1
Mexico	1
Nigeria	1
Peru	1
Portugal	1
Romania	1
Saint Lucia	1
Tanzania	1
Turkey	1
Yugoslavia	1

Language-wise Details

Language	Number
English	29 (32)[1]
French	16
German	14 (15)[2]
Spanish	11
Swedish	7
Italian	6
Russian	6
Polish	5
Norwegian	4
Danish	3
Chinese	2
Greek	2
Japanese	2
Arabic	1
Bengali	1
Czech	1

Language	Number
Finnish	1
Hebrew	1
Hungarian	1
Icelandic	1
Provençal (Occitan)	1
Portuguese	1
Serbo-Croatian	1
Turkish	1
Yiddish	1

---

1 Rabindranath Tagore (Nobel Prize in Literature 1913) wrote in Bengali and English, Samuel Beckett (Nobel Prize in Literature 1969) wrote in French and English and Joseph Brodsky (Nobel Prize in Literature 1987) wrote poetry in Russian and prose in English. These three Nobel laureates have been sorted under Bengali, French and Russian, respectively.[132]

2 Karl Adolph Gjellerup (Nobel Prize in Literature 1917) wrote in Danish and German.

The 120 Nobel laureates in literature from
1901 to 2023 were from the following sexes:

Decade	Male	Female
1900–1909	9	1

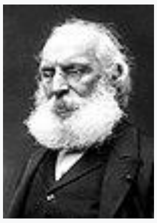
Decade	Male	Female
1910–1919	9	0
1920–1929	8	2
1930–1939	8	1
1940–1949	5	1
1950–1959	10	0
1960–1969	10	1
1970–1979	11	0
1980–1989	10	0
1990–1999	7	3
2000–2009	7	3
2010–2019	7	3
2020–2029	2	2
Total	103	17

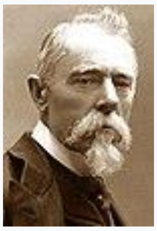
(😊)(😊)(😊)(😊)(😊)

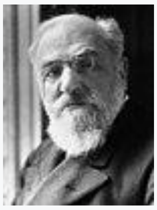
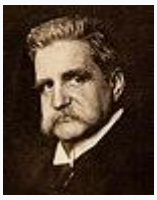
PEACE

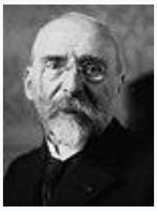
List of Laureates

The Nobel Peace Prize has been awarded 104 times to 141 Nobel Prize laureates between 1901 and 2023, 111 individuals and 30 organisations. Since the International Committee of the Red Cross has been awarded the Nobel Peace Prize three times (in 1917, 1944 and 1963), and the Office of the United Nations High Commissioner for Refugees has been awarded the Nobel Peace Prize two times (in 1954 and 1981), there are 27 individual organisations which have been awarded the Nobel Peace Prize.

Year	Laureate (birth/death)		Country	Rationale
1901		**Henry Dunant** (1828–1910)	Switzerland	"for his humanitarian efforts to help wounded soldiers and create international understanding"[8][9]
		**Frédéric Passy** (1822–1912)	France	"for his lifelong work for international peace conferences, diplomacy and arbitration."[8][9]
1902		**Élie Ducommun** (1833–1906)	Switzerland	"for his untiring and skilful directorship of the Bern Peace Bureau"[8][10]
		Charles Albert Gobat (1843–1914)		"for his eminently practical administration of the Inter-Parliamentary Union."[8][10]
1903		**William Randal Cremer** (1828–1908)	United Kingdom	"for his longstanding and devoted effort in favour of the ideas of peace and arbitration."[8][11]
1904	I·D·I INSTITUT DE DROIT INTERNATIONAL	**Institute of International Law** (founded 1873)	Belgium	"for its striving in public law to develop peaceful ties between nations and to make the laws of war more humane."[8][12]

Year	Laureate (birth/death)		Country	Rationale
1905		**Bertha von Suttner** (1843–1914)	Austria-Hungary	"for her audacity to oppose the horrors of war."[8][13]
1906		**Theodore Roosevelt** (1858–1919)	United States	"for his role in bringing to an end the bloody war recently waged between two of the world's great powers, Japan and Russia."[8][14]
1907		**Ernesto Teodoro Moneta** (1833–1918)	Italy	"for his work in the press and in peace meetings, both public and private, for an understanding between France and Italy"[8][15]
		Louis Renault (1843–1918)	France	"for his decisive influence upon the conduct and outcome of the Hague and Geneva Conferences."[8][15]
1908		**Klas Pontus Arnoldson** (1844–1916)	Sweden	"for their long time work for the cause of peace as politicians, peace society leaders, orators and authors."[8][16]
		Fredrik Bajer (1837–1922)	Denmark	
1909		**Auguste Beernaert** (1829–1912)	Belgium	"for their prominent position in the international movement for peace and arbitration."[8][17]
		Paul Henri d'Estournelles de Constant (1852–1924)	France	
1910		**Permanent International Peace Bureau** (founded 1891)	Switzerland	"for acting as a link between the peace societies of the various countries, and helping them to organize the world rallies of the international peace movement."[18][19]

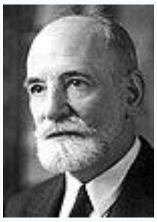
Year	Laureate (birth/death)		Country	Rationale
1911		**Tobias Asser** (1838–1913)	Netherlands	"for his role as co-founder of the Institut de droit international, initiator of the Conferences on International Private Law (Conférences de Droit international privé) at the Hague, and pioneer in the field of international legal relations"[8][20]
		Alfred Fried (1864–1921)	Austria-Hungary	"for his effort to expose and fight what he considers to be the main cause of war, namely, the anarchy in international relations."[8][20]
1912		**Elihu Root**[A] (1845–1937)	United States	"for bringing about better understanding between the countries of North and South America and initiating important arbitration agreements between the United States and other countries."[8][21]
1913		**Henri La Fontaine** (1854–1943)	Belgium	"for his unparalleled contribution to the organization of peaceful internationalism."[8][22]
1914	***Not awarded** due to World War I*.			
1915				
1916				
1917	ICRC	**International Committee of the Red Cross** (founded 1863)	Switzerland	"for the efforts to take care of wounded soldiers and prisoners of war and their families."[8][23]
1918	*Not awarded due to World War I*.			
1919		**Woodrow Wilson**[A] (1856–1924)	United States	"for his role as founder of the League of Nations."[8][24]
1920		**Léon Bourgeois** (1851–1925)	France	"for his longstanding contribution to the cause of peace and justice and his prominent role in the establishment of the League of Nations."[8][25]
1921		**Hjalmar Branting** (1860–1925)	Sweden	"for their lifelong contributions to the cause of peace and organized internationalism."[8][26]

Year	Laureate (birth/death)		Country	Rationale
		Christian Lange (1869–1938)	Norway	
1922		**Fridtjof Nansen** (1861–1930)	Norway	"for his leading role in the repatriation of prisoners of war, in international relief work and as the League of Nations' High Commissioner for refugees."[27][28]
1923	***Not awarded***			
1924				
1925		**Sir Austen Chamberlain**[A] (1863–1937)	United Kingdom	"for his crucial role in bringing about the Locarno Treaty."[8][29]
		Charles Gates Dawes[A] (1865–1951)	United States	"for his crucial role in bringing about the Dawes Plan."[8][29]
1926		**Aristide Briand** (1862–1932)	France	"for their crucial role in bringing about the Locarno Treaty."[8][30]
		Gustav Stresemann (1878–1929)	Germany	
1927		**Ferdinand Buisson** (1841–1932)	France	"for their contribution to the emergence in France and Germany of a public opinion which favours peaceful international cooperation."[8][31]
		Ludwig Quidde (1858–1941)	Germany	
1928	***Not awarded***			

Year	Laureate (birth/death)		Country	Rationale
1929		**Frank Billings Kellogg**[A] (1856–1937)	United States	"for his crucial role in bringing about the Kellogg-Briand Pact."[8][32]
1930		**Nathan Söderblom** (1866–1931)	Sweden	"for promoting Christian unity and helping create 'that new attitude of mind which is necessary if peace between nations is to become reality'."[8][33]
1931		**Jane Addams** (1860–1935)	United States	"for their assiduous effort to revive the ideal of peace and to rekindle the spirit of peace in their own nation and in the whole of mankind."[8][34]
		Nicholas Murray Butler (1862–1947)	United States	
1932	***Not awarded***			
1933		**Sir Norman Angell**[A] (1872–1967)	United Kingdom	"for having exposed by his pen the illusion of war and presented a convincing plea for international cooperation and peace."[35]
1934		**Arthur Henderson** (1863–1935)	United Kingdom	"for his untiring struggle and his courageous efforts as Chairman of the League of Nations Disarmament Conference 1931-34."[8][36][37]
1935		**Carl von Ossietzky**[A][B] (1889–1938)	Germany	"for his burning love for freedom of thought and expression and his valuable contribution to the cause of peace."[8][38]
1936		**Carlos Saavedra Lamas** (1878–1959)	Argentina	"for his role as father of the Argentine Antiwar Pact of 1933, which he also used as a means to mediate peace between Paraguay and Bolivia in 1935."[8][39]

Year	Laureate (birth/death)		Country	Rationale
1937		**The Viscount Cecil of Chelwood** (1864–1958)	United Kingdom	"for his tireless effort in support of the League of Nations, disarmament and peace."[8][40]
1938		**Nansen International Office for Refugees** (1930–1939)	League of Nations	"for having carried on the work of Fridtjof Nansen to the benefit of refugees across Europe."[41]
1939	***Not awarded*** *due to World War II*.			
1940				
1941				
1942				
1943				
1944		**International Committee of the Red Cross**[A] (founded 1863)	Switzerland	"for the great work it has performed during the war on behalf of humanity."[42][43]
1945		**Cordell Hull** (1871–1955)	United States	"for his indefatigable work for international understanding and his pivotal role in establishing the United Nations."[44]
1946		**Emily Greene Balch** (1867–1961)	United States	"for her lifelong work for the cause of peace"[45]
		John Raleigh Mott (1865–1955)	United States	"for his contribution to the creation of a peace-promoting religious brotherhood across national boundaries."[45]
1947		**The Quakers** (represented by Friends Service Council and American Friends Service Committee)[46][47] (started during the mid-17th century)	United States & United Kingdom	"for their pioneering work in the international peace movement and compassionate effort to relieve human suffering, thereby promoting the fraternity between nations."[48]
1948	***Not awarded*** *because "there was no suitable living candidate."* (A tribute to the recently assassinated Mohandas Gandhi in India.)[49]			

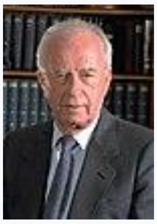
Year	Laureate (birth/death)		Country	Rationale
1949		**Lord Boyd-Orr** (1880–1971)	United Kingdom	"for his lifelong effort to conquer hunger and want, thereby helping to remove a major cause of military conflict and war."[50]
1950		**Ralph Bunche** (1904–1971)	United States	"for his work as mediator in Palestine in 1948-1949."[51]
1951		**Léon Jouhaux** (1879–1954)	France	"for having devoted his life to the fight against war through the promotion of social justice and brotherhood among men and nations."[52]
1952		**Albert Schweitzer**[A] (1875–1965)	France	"for his altruism, reverence for life, and tireless humanitarian work which has helped making the idea of brotherhood between men and nations a living one."[53]
1953		**George Catlett Marshall Jr.** (1880–1959)	United States	"for proposing and supervising the plan for the economic recovery of Europe."[54]
1954	UNHCR The UN Refugee Agency	**Office of the United Nations High Commissioner for Refugees**[A] (founded 1950)	United Nations	"for its efforts to heal the wounds of war by providing help and protection to refugees all over the world."[55]
1955	***Not awarded***			
1956				
1957		**Lester Bowles Pearson** (1897–1972)	Canada	"for his crucial contribution to the deployment of a United Nations Emergency Force in the wake of the Suez Crisis."[56][8]
1958		**Dominique Pire** (1910–1969)	Belgium	"for his efforts to help refugees to leave their camps and return to a life of freedom and dignity."[57]

Year	Laureate (birth/death)		Country	Rationale
1959		**Philip Noel-Baker** (1889–1982)	United Kingdom	"for his longstanding contribution to the cause of disarmament and peace."[58]
1960		**Albert Lutuli**[A] (1898–1967)	South Africa	"for his non-violent struggle against apartheid."[59][8]
1961		**Dag Hammarskjöld**[C] (1905–1961)	Sweden	"for developing the UN into an effective and constructive international organization, capable of giving life to the principles and aims expressed in the UN Charter."[60][8]
1962		**Linus Pauling**[A] (1901–1994)	United States	"for his fight against the nuclear arms race between East and West."[61]
1963	ICRC	**International Committee of the Red Cross** (founded 1863)	Switzerland	"for promoting the principles of the Geneva Convention and cooperation with the UN."[62]
		League of Red Cross Societies (founded 1919)		
1964		**Martin Luther King Jr.** (1929–1968)	United States	"for his non-violent struggle for civil rights for the Afro-American population."[63]
1965	unicef	**United Nations Children's Fund (UNICEF)** (founded 1946)	United Nations	"for its effort to enhance solidarity between nations and reduce the difference between rich and poor states."[64]
1966	***Not awarded***			
1967				
1968		**René Cassin** (1887–1976)	France	"for his struggle to ensure the rights of man as stipulated in the UN Declaration."[65]

Year	Laureate (birth/death)		Country	Rationale
1969		**International Labour Organization** (founded 1919)	United Nations	"for creating international legislation insuring certain norms for working conditions in every country."[66]
1970		**Norman Ernest Borlaug** (1914–2009)	United States	"for having given a well-founded hope - the green revolution."[67][8]
1971		**Willy Brandt** (1913–1992)	West Germany	"for paving the way for a meaningful dialogue between East and West."[68]
1972	***Not awarded***			
1973		**Henry Kissinger** (1923–2023)	United States	"for jointly having negotiated a cease fire in Vietnam in 1973."[8][69]
		Lê Đức Thọ[D] (1911–1990)	North Vietnam	
1974		**Seán MacBride** (1904–1988)	Ireland	"for his efforts to secure and develop human rights throughout the world"[70][8]
		Eisaku Satō (1901–1975)	Japan	"for his contribution to stabilize conditions in the Pacific rim area and for signing the Nuclear Non-Proliferation Treaty."[70][8]
1975		**Andrei Sakharov**[E] (1921–1989)	Soviet Union	"for his struggle for human rights in the Soviet Union, for disarmament and cooperation between all nations."[71]
1976		**Betty Williams** (1943–2020)	United Kingdom	"for the courageous efforts in founding a movement to put an end to the violent conflict in Northern Ireland."[72]

Year	Laureate (birth/death)		Country	Rationale
		Mairead Corrigan (born 1944)		
1977		**Amnesty International** (founded 1961)	United Kingdom	"for worldwide respect for human rights."[8][73]
1978		**Muhammad Anwar el-Sadat** (1918–1981)	Egypt	"for jointly having negotiated peace between Egypt and Israel in 1978."[74]
		Menachem Begin (1913–1992)	Israel	
1979		**Mother Teresa** (1910–1997)	India (Born in Ottoman Empire)	"for her work for bringing help to suffering humanity."[75]
1980		**Adolfo Pérez Esquivel** (born 1931)	Argentina	"for being a source of inspiration to repressed people, especially in Latin America."[76][8]
1981		**Office of the United Nations High Commissioner for Refugees** (founded 1950)	United Nations	"for promoting the fundamental rights of refugees."[77]
1982		**Alva Myrdal** (1902–1986)	Sweden	"for their work for disarmament and nuclear and weapon-free zones."[78][79]
		Alfonso García Robles (1911–1991)	Mexico	
1983		**Lech Wałęsa** (born 1943)	Poland	"for non-violent struggle for free trade unions and human rights in Poland."[80]

Year	Laureate (birth/death)		Country	Rationale
1984		**Desmond Tutu** (1931–2021)	South Africa	"for his role as a unifying leader figure in the non-violent campaign to resolve the problem of apartheid in South Africa"[81]
1985		**International Physicians for the Prevention of Nuclear War** (founded 1980)	United States	"for spreading authoritative information and by creating awareness of the catastrophic consequences of nuclear war."[82]
1986		**Elie Wiesel** (1928–2016)	United States (born in Romania)	"for being a messenger to mankind: his message is one of peace, atonement and dignity."[83]
1987		**Óscar Arias** (born 1940)	Costa Rica	"for his work for lasting peace in Central America."[84]
1988		**United Nations Peace-Keeping Forces** (founded 1945)	United Nations	"for preventing armed clashes and creating conditions for negotiations."[85][86]
1989		**Tenzin Gyatso, 14th Dalai Lama** (born 1935)	India (Born in Tibet)[87]	"for advocating peaceful solutions based upon tolerance and mutual respect in order to preserve the historical and cultural heritage of his people."[88][89]
1990		**Mikhail Gorbachev** (1931–2022)	Soviet Union	"for the leading role he played in the radical changes in East-West relations."[90]
1991		**Aung San Suu Kyi**[F] (born 1945)	Burma	"for her non-violent struggle for democracy and human rights."[91]
1992		**Rigoberta Menchú** (born 1959)	Guatemala	"for her struggle for social justice and ethno-cultural reconciliation based on respect for the rights of indigenous peoples."[92]

Year	Laureate (birth/death)		Country	Rationale
1993		**Nelson Mandela** (1918–2013)	South Africa	"for their work for the peaceful termination of the apartheid regime, and for laying the foundations for a new democratic South Africa."[93]
		Frederik Willem de Klerk (1936–2021)	South Africa	
1994		**Yasser Arafat** (1929–2004)	Palestine	"for their efforts to create peace in the Middle East."[94]
		**Yitzhak Rabin** (1922–1995)	Israel	
		Shimon Peres (1923–2016)	Israel	
1995		**Joseph Rotblat** (1908–2005)	Poland	"for their efforts to diminish the part played by nuclear arms in international politics and, in the longer run, to eliminate such arms."[95]
	Pugwash	**Pugwash Conferences on Science and World Affairs**	Canada	
1996		**Carlos Filipe Ximenes Belo** (born 1948)	East Timor	"for their work towards a just and peaceful solution to the conflict in East Timor."[96]
		José Ramos-Horta (born 1949)	East Timor	

Year	Laureate (birth/death)		Country	Rationale
1997		**International Campaign to Ban Landmines** (founded 1992)	Switzerland	"for their work for the banning and clearing of anti-personnel mines."[97]
		Jody Williams (born 1950)	United States	
1998		**John Hume** (1937–2020)	Ireland	"for their efforts to find a peaceful solution to the conflict in Northern Ireland."[98]
		David Trimble (1944–2022)	United Kingdom	
1999		**Médecins Sans Frontières**	Switzerland	"in recognition of the organization's pioneering humanitarian work on several continents."[99]
2000		**Kim Dae-jung** (1924–2009)	South Korea	"for his work for democracy and human rights in South Korea and in East Asia in general, and for peace and reconciliation with North Korea in particular."[100]
2001		**United Nations**	United Nations	"for their work for a better organized and more peaceful world."[101]
		Kofi Annan (1938–2018)	Ghana	
2002		**Jimmy Carter** (born 1924)	United States	"for his decades of untiring effort to find peaceful solutions to international conflicts, to advance democracy and human rights, and to promote economic and social development."[102]
2003		**Shirin Ebadi** (born 1947)	Iran	"for her efforts for democracy and human rights. She has focused especially on the rights of women and children."[103]

Year	Laureate (birth/death)		Country	Rationale
2004		**Wangari Muta Maathai** (1940–2011)	Kenya	"for her contribution to sustainable development, democracy and peace."[104]
2005		**International Atomic Energy Agency** (founded 1957)	United Nations	"for their efforts to prevent nuclear energy from being used for military purposes and to ensure that nuclear energy for peaceful purposes is used in the safest possible way."[105]
		Mohamed ElBaradei (born 1942)	Egypt	
2006		**Muhammad Yunus** (born 1940)	Bangladesh	"for their efforts to create economic and social development from below."[106]
	Grameen Bank	**Grameen Bank** (founded 1983)	Bangladesh	
2007	ipcc	**Intergovernmental Panel on Climate Change** (founded 1988)	United Nations	"for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change."[107]
		Al Gore (born 1948)	United States	
2008		**Martti Ahtisaari** (1937–2023)	Finland	"for his important efforts, on several continents and over more than three decades, to resolve international conflicts."[108]
2009		**Barack Obama** (born 1961)	United States	"for his extraordinary efforts to strengthen international diplomacy and cooperation between peoples."[109]
2010		**Liu Xiaobo**[G] (1955–2017)	China	"for his long and non-violent struggle for fundamental human rights in China."[110]

Year	Laureate (birth/death)		Country	Rationale
2011		**Ellen Johnson Sirleaf** (born 1938)	Liberia	"for their non-violent struggle for the safety of women and for women's rights to full participation in peace-building work."[111]
		Leymah Gbowee (born 1972)		
		Tawakkul Karman (born 1979)	Yemen	
2012		**European Union** (founded 1958)	European Union	"for over six decades contributed to the advancement of peace and reconciliation, democracy and human rights in Europe."[112]
2013		**Organisation for the Prohibition of Chemical Weapons** (founded 1997)	Netherlands[113]	"for its extensive efforts to eliminate chemical weapons."[114]
2014		**Kailash Satyarthi** (born 1954)	India	"for their struggle against the suppression of children and young people and for the right of all children to education."[115]
		Malala Yousafzai (born 1997)	Pakistan	
2015		**Tunisian National Dialogue Quartet** (2013–2014)	Tunisia	"for its decisive contribution to the building of a pluralistic democracy in Tunisia in the wake of the Jasmine Revolution of 2011."[116]
2016		**Juan Manuel Santos** (born 1951)	Colombia	"for his resolute efforts to bring the country's more than 50-year-long civil war to an end."[117]
2017	ICAN	**International Campaign to Abolish Nuclear Weapons** (founded 2007)	Switzerland	"for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons."[118]

Year	Laureate (birth/death)		Country	Rationale
2018		**Denis Mukwege** (born 1955)	Democratic Republic of the Congo	"for their efforts to end the use of sexual violence as a weapon of war and armed conflict."[119]
		Nadia Murad (born 1993)	Iraq	
2019		**Abiy Ahmed** (born 1976)	Ethiopia	"for his efforts to achieve peace and international cooperation, and in particular for his decisive initiative to resolve the border conflict with neighbouring Eritrea."[120]
2020	WFP	**World Food Programme** (founded 1961)	United Nations	"for its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict."[121]
2021		**Maria Ressa** (born 1963)	Philippines	"for their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace."[122]
		Dmitry Muratov (born 1961)	Russia	
2022		**Ales Bialiatski** (born 1962)	Belarus	"The Peace Prize laureates represent civil society in their home countries. They have for many years promoted the right to criticise power and protect the fundamental rights of citizens. They have made an outstanding effort to document war crimes, human right abuses and the abuse of power. Together they demonstrate the significance of civil society for peace and democracy."[123]
		Memorial (founded 1989)	Russia	
	Центр Громадянських Свобод	**Centre for Civil Liberties** (founded 2007)	Ukraine	
2023		**Narges Mohammadi** (born 1972)	Iran	"for her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all"[124]

Category	Total
Men	93
Women	19
International organizations	26
Not delivered	19

(😊)(😊)(😊)(😊)(😊)

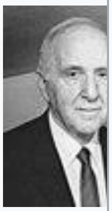
ECONOMIC SCIENCES

LIST OF LAUREATES

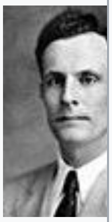
The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel has been awarded 55 times to 93 laureates between 1969 and 2023.

The Nobel Memorial Prize in Economic Sciences, officially known as The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (Swedish: Sveriges riksbanks pris i ekonomisk vetenskap till Alfred Nobels minne), is an award funded by Sveriges Riksbank and is annually awarded by the Royal Swedish Academy of Sciences to researchers in the field of economic sciences.The first prize was awarded in 1969 to Ragnar Frisch and Jan Tinbergen. Each recipient receives a medal, a diploma and a monetary award that has varied throughout the years. In 1969, Frisch and Tinbergen were given a combined 375,000 SEK, which is equivalent to 2,871,041 SEK in December 2007. The award is presented in Stockholm at an annual ceremony on December 10, the anniversary of Nobel's death.

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1969		Ragnar Frisch (1895–1973)	Norway	"for having developed and applied dynamic models for the analysis of economic processes"[2]	University of Oslo	University of Oslo	Frisch–Waugh–Lovell theorem, Conjectural variation
		Jan Tinbergen (1903–1994)	Netherlands		Leiden University	Erasmus University	Econometrics, Policy instruments

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1970		Paul Samuelson (1915–2009)	United States	"for the scientific work through which he has developed static and dynamic economic theory and actively contributed to raising the level of analysis in economic science"[8]	Harvard University	Massachusetts Institute of Technology	Revealed preference, Samuelson condition, Social Welfare Function, Efficient-market hypothesis, Turnpike theory, Balassa–Samuelson effect, Stolper–Samuelson theorem, Overlapping generations model
1971		Simon Kuznets (1901–1985)	United States	"for his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development"[9]	Columbia University	Harvard University	Gross domestic product, Capital formation, Kuznets cycle, Kuznets curve
1972		John Hicks (1904–1989)	United Kingdom	"for their pioneering contributions to general economic equilibrium theory and welfare theory"[10]	University of Oxford	University of Oxford	IS–LM model, Hicksian demand function, substitution effect, income effect, Kaldor–Hicks efficiency
		Kenneth Arrow (1921–2017)	United States		Columbia University	Harvard University	Fundamental theorems of welfare economics, Arrow's impossibility theorem, Arrow–Debreu model, Endogen

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
							ous growth theory,
1973		Wassily Leontief (1905–1999)	Soviet Union United States	"for the development of the input-output method and for its application to important economic problems"[11]	University of Berlin	Harvard University	Input–output model, Leontief paradox
1974		Gunnar Myrdal (1898–1987)	Sweden	"for their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena"[12]	Stockholm University	Stockholm University	Circular cumulative causation
		Friedrich Hayek (1899–1992)	Austria United Kingdom		University of Vienna	London School of Economics,University of Salzburg	Austrian business cycle theory, Economic calculation problem, Spontaneous order, Information economics
1975		Leonid Kantorovich (1912–1986)	Soviet Union	"for their contributions to the theory of optimum allocation of resources"[13]	Leningrad State University	Novosibirsk State University	Linear programming, Kantorovich theorem, Kantorovich inequality, Kantorovich metric
		Tjalling Koopmans (1910–1985)	Netherlands United States		University of Leiden	University of Chicago, Yale University	Linear programming

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1976		Milton Friedman (1912–2006)	United States	"for his achievements in the fields of consumption analysis, monetary history and theory and for his demonstration of the complexity of stabilisation policy"[14]	Columbia University	University of Chicago	Monetarism, Permanent income hypothesis, Natural rate of unemployment, Sequential analysis, Helicopter money, Great Contraction, Friedman rule, Friedman–Savage utility function, Friedman test
1977		Bertil Ohlin (1899–1979)	Sweden	"for their pathbreaking contribution to the theory of international trade and international capital movements"[15]	Stockholm University	Stockholm School of Economics	Heckscher–Ohlin model
		James Meade (1907–1995)	United Kingdom		University of Cambridge	University of Cambridge	Nominal income target
1978		Herbert A. Simon (1916–2001)	United States	"for his pioneering research into the decision-making process within economic organizations"[16]	University of Chicago	Carnegie Mellon University	Bounded rationality, satisficing, preferential attachment
1979		Theodore Schultz (1902–1998)	United States	"for their pioneering research into economic development research with particular	University of Wisconsin-Madison	University of Chicago	Human Capital Theory

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Arthur Lewis (1915–1991)	Saint Lucia United Kingdom	consideration of the problems of developing countries"[17]	London School of Economics	Princeton University	Lewis model, Lewis turning point
1980		Lawrence Klein (1920–2013)	United States	"for the creation of econometric models and the application to the analysis of economic fluctuations and economic policies"[18]	Massachusetts Institute of Technology	University of Pennsylvania	Macroeconomics forecasting
1981		James Tobin (1918–2002)	United States	"for his analysis of financial markets and their relations to expenditure decisions, employment, production and prices"[19]	Harvard University	Yale University	Tobin tax, Tobit model, Tobin's q, Baumol–Tobin model
1982		George Stigler (1911–1991)	United States	"for his seminal studies of industrial structures, functioning of markets and causes and effects of public regulation"[20]	University of Chicago	University of Chicago	Regulatory capture
1983		Gérard Debreu (1921–2004)	France	"for having incorporated new analytical methods into economic theory and for his rigorous reformulation of the theory of general equilibrium"[21]	École Normale Supérieure University of Paris	University of California, Berkeley	Arrow–Debreu model, Sonnenschein–Mantel–Debreu theorem

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1984		Richard Stone (1913–1991)	United Kingdom	"for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis"[22]	University of Cambridge	University of Cambridge	National accounts
1985		Franco Modigliani (1918–2003)	Italy	"for his pioneering analyses of saving and of financial markets"[23]	The New School for Social Research	Massachusetts Institute of Technology	Modigliani–Miller theorem, Life-cycle hypothesis
1986		James M. Buchanan (1919–2013)	United States	"for his development of the contractual and constitutional bases for the theory of economic and political decision-making"[24]	University of Chicago	George Mason University	Constitutional economics
1987		Robert Solow (1924–2023)	United States	"for his contributions to the theory of economic growth"[25]	Harvard University	Massachusetts Institute of Technology	Solow–Swan model
1988		Maurice Allais (1911–2010)	France	"for his pioneering contributions to the theory of markets and efficient utilization of resources"[26]	École Polytechnique	École Nationale Supérieure des Mines de Paris, Paris Nanterre University	OLG model, Allais paradox, Golden Rule savings rate

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1989		Trygve Haavelmo (1911–1999)	Norway	"for his clarification of the probability theory foundations of econometrics and his analyses of simultaneous economic structures"[27]	University of Oslo	University of Oslo	Balanced budget multiplier
1990		Harry Markowitz (1927–2023)	United States	"for their pioneering work in the theory of financial economics"[28]	University of Chicago	City University of New York	Modern portfolio theory, Markowitz model, Efficient frontier
		Merton Miller (1923–2000)			Johns Hopkins University	Carnegie Mellon University, University of Chicago	Modigliani–Miller theorem
		William F. Sharpe (b. 1934)			University of California, Los Angeles	Stanford University	Sharpe Ratio, Binomial options pricing model, Returns-based style analysis
1991		Ronald Coase (1910–2013)	United Kingdom	"for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy"[29]	London School of Economics	University of Chicago, London School of Economics	Transaction costs, Coase theorem, Coase conjecture

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
1992		Gary Becker (1930–2014)	United States	"for having extended the domain of microeconomic analysis to a wide range of human behaviour and interaction, including non-market behaviour"[30]	University of Chicago	University of Chicago	Human Capital Theory
1993		Robert Fogel (1926–2013)	United States	"for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change"[31]	Johns Hopkins University	University of Chicago	Cliometrics
		Douglass North (1920–2015)			University of California, Berkeley	Washington University in St Louis	
1994		John Harsanyi (1920–2000)	Hungary United States	"for their pioneering analysis of equilibria in the theory of non-cooperative games"[32]	Stanford University	University of California, Berkeley	Bayesian game, Preference utilitarianism, Equilibrium selection
		John Forbes Nash (1928–2015)	United States		Princeton University	Princeton University	Nash equilibrium, Nash embedding theorem, Nash functions, Nash–Moser theorem

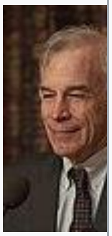
Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Reinhard Selten (1930–2016)	Germany		Goethe University Frankfurt	University of Bonn	Experimental economics
1995		Robert Lucas, Jr. (1937–2023)	United States	"for having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepened our understanding of economic policy"[33]	University of Chicago	University of Chicago	Rational expectations, Lucas critique, Lucas paradox, Lucas aggregate supply function, Uzawa–Lucas model
1996		James Mirrlees (1936–2018)	United Kingdom	"for their fundamental contributions to the economic theory of incentives under asymmetric information"[34]	University of Cambridge	University of Oxford,University of Cambridge	Optimal labor income taxation
		William Vickrey (1914–1996)	Canada United States		Columbia University	Columbia University	Vickrey auction, Revenue equivalence, Congestion pricing
1997		Robert C. Merton (b. 1944)	United States	"for a new method to determine the value of derivatives"[35]	Massachusetts Institute of Technology	Massachusetts Institute of Technology	Black–Scholes–Merton model, ICAPM, Merton's portfolio problem

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Myron Scholes (b. 1941)	Canada United States		University of Chicago	Stanford University	Black–Scholes–Merton model
1998		Amartya Sen (b. 1933)	India	"for his contributions to welfare economics"[36]	University of Cambridge	Harvard University, University of Cambridge	Human development theory, Capability approach
1999		Robert Mundell (1932–2021)	Canada	"for his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas"[37]	Massachusetts Institute of Technology	Columbia University	Optimum currency area, Supply-side economics, Mundell–Fleming model, Mundell–Tobin effect
2000		James Heckman (b. 1944)	United States	"for his development of theory and methods for analyzing selective samples"[38]	Princeton University	University of Chicago	Heckman correction
		Daniel McFadden (b. 1937)		"for his development of theory and methods for analyzing discrete choice"[38]	University of Minnesota	University of California, Berkeley,Massachusetts Institute of Technology	Discrete choice models
2001		George Akerlof (b. 1940)	United States	"for their analyses of markets with information asymmetry"[39]	Massachusetts Institute of Technology	Georgetown University, University of California, Berkeley	Adverse selection (The Market for Lemons), Efficiency wage, Identity economics

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Michael Spence (b. 1943)			Harvard University	Harvard University	Signalling theory
		Joseph Stiglitz (b. 1943)			Massachusetts Institute of Technology	Princeton University, Columbia University	Screening theory, Henry George theorem, Shapiro–Stiglitz theory
2002		Daniel Kahneman (b. 1934)	Israel United States	"for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty"[40]	University of California, Berkeley	Princeton University, University of British Columbia	Behavioral economics, Prospect theory, loss aversion, cognitive biases
		Vernon L. Smith (b. 1927)	United States	"for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms"[40]	Harvard University	University of Arizona	Experimental economics, Combinatorial auction
2003		Robert F. Engle (b. 1942)	United States	"for methods of analyzing economic time series with time-varying volatility (ARCH)"[41]	Cornell University	University of California, San Diego	ARCH

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Clive Granger (1934–2009)	United Kingdom	"for methods of analyzing economic time series with common trends (cointegration)"[41]	University of Nottingham	University of California, San Diego	Cointegration, Granger causality
2004		Finn E. Kydland (b. 1943)	Norway	"for their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles"[42]	Carnegie Mellon University	University of California, Santa Barbara	RBC theory, Dynamic inconsistency in monetary policy
		Edward C. Prescott (1940–2022)	United States		Carnegie Mellon University	Carnegie Mellon University, Arizona State University, University of Minnesota	Hodrick-Prescott filter
2005		Robert J. Aumann (b. 1930)	United States Israel	"for having enhanced our understanding of conflict and cooperation through game-theory analysis"[43]	Massachusetts Institute of Technology	Hebrew University of Jerusalem	Correlated equilibrium, Aumann's agreement theorem
		Thomas C. Schelling (1921–2016)	United States		Harvard University	Yale University, Harvard University	Schelling point, Egonomics
2006		Edmund S. Phelps (b. 1933)	United States	"for his analysis of intertemporal tradeoffs in macroeconomic policy"[44]	Yale University	Columbia University	Golden Rule savings rate, Natural rate of unemployment, Statistical discrimination

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
2007		Leonid Hurwicz (1917–2008)	Poland United States	"for having laid the foundations of mechanism design theory"[45]	London School of Economics	University of Minnesota, Iowa State University	Mechanism design
		Eric S. Maskin (b. 1950)	United States		Harvard University	Harvard University	
		Roger Myerson (b. 1951)			Harvard University	Northwestern University	
2008		Paul Krugman (b. 1953)	United States	"for his analysis of trade patterns and location of economic activity"[46]	Massachusetts Institute of Technology	Princeton University	New trade theory, New Economic Geography, Home market effect
2009		Elinor Ostrom (1933–2012)	United States	"for her analysis of economic governance, especially the commons"[47]	University of California, Los Angeles	Indiana University	Institutional Analysis and Development framework
		Oliver E. Williamson (1932–2020)		"for his analysis of economic governance, especially the boundaries of the firm"[47]	Carnegie Mellon University	University of Pennsylvania, University of California, Berkeley	New institutional economics

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
2010		Peter A. Diamond (b. 1940)	United States	"for their analysis of markets with search frictions"[48]	Massachusetts Institute of Technology	Massachusetts Institute of Technology	Diamond–Mirrlees efficiency theorem, Diamond coconut model
		Dale T. Mortensen (1939–2014)			Carnegie Mellon University	Northwestern University	Matching theory
		Christopher A. Pissarides (b. 1948)	Cyprus United Kingdom		London School of Economics	London School of Economics	Matching theory
2011		Thomas J. Sargent (b. 1943)	United States	"for their empirical research on cause and effect in the macroeconomy"[49]	Harvard University	Hoover Institution, University of Minnesota	Policy-ineffectiveness proposition
		Christopher A. Sims (b. 1942)			Harvard University	Princeton University	Vector Autoregression in macroeconomics, Fiscal theory of the price level, Rational inattention
2012		Alvin E. Roth (b. 1951)	United States	"for the theory of stable allocations and the practice of market design"[50]	Stanford University	Stanford University, Harvard University	Stable marriage problem, Repugnancy costs

[220]

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
		Lloyd S. Shapley (1923–2016)			Princeton University	University of California, Los Angeles	Shapley value, stochastic game, Potential game, Shapley–Shubik power index, Bondareva–Shapley theorem, Gale–Shapley algorithm, Shapley–Folkman lemma
2013		Eugene F. Fama (b. 1939)	United States	"for their empirical analysis of asset prices"[51]	University of Chicago	University of Chicago	Fama–French three-factor model, Weak, semi-strong, and strong efficient-market hypothesis
		Lars Peter Hansen (b. 1952)			University of Minnesota	University of Chicago	Generalized method of moments
		Robert J. Shiller (b. 1946)			Massachusetts Institute of Technology	Yale University	Case–Shiller index, CAPE Index
2014		Jean Tirole (b. 1953)	France	"for his analysis of market power and regulation"[52]	Massachusetts Institute of Technology	Massachusetts Institute of Technology Toulouse School of Economics École des hautes études en sciences sociales	Markov perfect equilibrium, Two-sided market

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
2015		Angus Deaton (b. 1945)	United Kingdom United States	"for his analysis of consumption, poverty, and welfare"[53]	University of Cambridge	Princeton University	Almost ideal demand system, Pseudo panels, Household surveys in developing countries
2016		Oliver Hart (b. 1948)	United Kingdom United States	"for their contributions to contract theory"[54]	Princeton University	Harvard University	Moral Hazard, Incomplete contracts
		Bengt Holmström (b. 1949)	Finland		Stanford University	Massachusetts Institute of Technology	Informativeness Principle
2017		Richard Thaler (b. 1945)	United States	"for his contributions to behavioural economics"[55]	University of Rochester	Cornell University, University of Chicago	Nudge Theory, Mental Accounting, Choice Architecture
2018		William Nordhaus (b. 1941)	United States	"for integrating climate change into long-run macroeconomic analysis"[56]	Massachusetts Institute of Technology	Yale University	DICE model
		Paul Romer (b. 1955)		"for integrating technological innovations into long-run macroeconomic analysis"	University of Chicago	New York University	Incorporation of R&D to the Endogenous growth theory

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
2019		Abhijit Banerjee (b. 1961)	United States	"for their experimental approach to alleviating global poverty"[57]	Harvard University	Massachusetts Institute of Technology	Use of RCTs in development economics
		Esther Duflo (b. 1972)	France United States		Massachusetts Institute of Technology	Massachusetts Institute of Technology	
		Michael Kremer (b. 1964)	United States		Harvard University	Harvard University	
2020		Paul Milgrom (b. 1948)	United States	"for improvements to auction theory and inventions of new auction formats"[58]	Stanford University	Stanford University	Simultaneous multiple round auctions (SMRA), No-trade theorem, Market design, Reputation effects (game theory), supermodular games, monotone comparative statics, Linkage principle, Deferred-acceptance auction
		Robert B. Wilson (b. 1937)	United States		Harvard University	Stanford University	Simultaneous multiple round auctions (SMRA), Common value auction, Reputation effects (game

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
							theory), Wilson doctrine
2021		David Card (b. 1956)	Canada United States	"for his empirical contributions to labour economics"[59]	Princeton University	University of California, Berkeley	Natural experiments on labour economics (incl. Difference in differences)
		Joshua Angrist (b. 1960)	United States Israel	"for their methodological contributions to the analysis of causal relationships"[59]	Princeton University	Massachusetts Institute of Technology	Local average treatment effect, natural experiments to estimate causal links
		Guido Imbens (b. 1963)	United States Netherlands		Brown University	Stanford University	
2022		Ben Bernanke (b. 1953)	United States	"for research on banks and financial crises"[60]	Massachusetts Institute of Technology	Princeton University, Brookings Institution	Analysis of the Great Depression
		Douglas Diamond (b. 1953)			Yale University	University of Chicago	Diamond–Dybvig model
		Philip H. Dybvig (b. 1955)			Yale University	Washington University in St. Louis	

Year	Portrait	Laureate (birth/death)	Country	Rationale	PhD (or equivalent) alma mater	Institution (most significant tenure/at time of receipt)	Key contributions (non-exhaustive)
2023		Claudia Goldin (b. 1946)	United States	"for having advanced our understanding of women's labour market outcomes"[61]	THE UNIVERSITY OF CHICAGO University of Chicago	HARVARD UNIVERSITY Harvard University	Analysis of historical experience of women in the economy

List of Economic Nobel laureates by Institution PhD (alma mater)

Logo	Institution	Country	Number of laureates
HARVARD UNIVERSITY	Harvard University	United States	**14** (1970,1981,1987,2001,2002,2005,2007,2007,2008,2011,2011,2019,2019,2020)
MIT	Massachusetts Institute of Technology	United States	**12** (1980,1997,1999,2001,2001,2005,2010,2013,2014,2018,2019,2022)
THE UNIVERSITY OF CHICAGO	University of Chicago	United States	**10** (1978,1982,1986,1990,1992.1995,1997,2013,2018,2023)
	Princeton University	United States	**6** (1994,2000,2012,2016,2021,2021)
	University of Cambridge	United Kingdom	**5** (1977,1984,1996,1998,2015)
Stanford	Stanford University	United States	**4** (1994,2012,2016,2020)
COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK	Columbia University	United States	**4** (1971,1972,1976,1996)

Logo	Institution	Country	Number of laureates
LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE	London School of Economics	United Kingdom	**4** (1979,1992,2007,2010)
Yale	Yale University	United States	**3** (2006,2022,2022)
Berkeley UNIVERSITY OF CALIFORNIA	University of California, Berkeley	United States	**2** (1993, 2002)

List of Economic Nobel laureates by country

Country	Number of Nobel laureates
United States	56
United Kingdom	9
France	4
Canada	4
Norway	3
Israel	3
Netherlands	3
Sweden	2
Germany	1
India	1

Country	Number of Nobel laureates
Russia	1
Austria	1
Soviet Union	1
Italy	1
Cyprus	1
Poland	1
Finland	1

(😊)*(😊)*(😊)*(😊)*(😊)

Indians

Nobel Prize

(😊)(😊)(😊)(😊)(😊)

Nobel Prize Winners in India:

Nobel Prize is one of the most recognized awards in the world and many Indian have been acknowledged with this prestigious award which is usually offered in six different fields, that is Literature, Physics, Chemistry, Economic Sciences, Peace and Physiology, or Medicine. The awardee of this honor is called Laureates and are given a gold medal, a diploma, and a monetary award. This article discusses the contribution of those handfuls of Indians who contributed their whole life to the well beginning of humankind. In respect of gratitude and honors, they have been awarded the Nobel Prize in different fields. Before directly jumping to know about the list of Winners of the Nobel Prize in India, let us know about the History of the Nobel Prize, Nobel Prize Insignia, etc

History of the Nobel Prize

The Nobel Prize, established in 1901 to honor the memory of Swedish scientist Alfred Nobel, is awarded to individuals who have made significant contributions for the betterment of humanity. This prestigious award is usually offered in six different fields, that is literature, Physics, Chemistry, Economic, Science, Peace and Physiology or Medicine.

When Alfred Nobel died in 1896, in his will he passed on his asset to be used for the establishment of prizes which are names “Nobel Prizes”. The Nobel Prize was first awarded in 1901. In 1968, a central bank of Sweden, that is, Sveriges Riksbank funded the establishment of the Nobel Prize for Economic Sciences. From then onwards, the Nobel Prizes are awarded in six different fields.

Nobel Prize Insignia

The awardee of the Noble Prize is conferred with three things- a medal, a diploma and award money. The Nobel Prize insignia are made of 24 karat gold plated with green gold. They are about 65 millimetres in diameter and weigh about 175 grams. The medals are awarded to the laureates at a ceremony in Stockholm, Sweden, on December 10, the anniversary of Alfred Nobel’s death.

LIST OF NOBEL LAUREATES

S.No	Name	Category	Year	Country / Province / Place
1	Abhijit Banerjee	Economics	2019	United States (born in Calcutta, India)
2	Kailash Satyarthi	Peace	2014	Madhya Pradesh
3	Venki Ramakrishnan	Chemistry	2009	United Kingdom United States (born in Chidambaram, India)
4	Amartya Sen	Economics	1998	West Bengal
5	14th Dalai Lama	Peace	1989	India (born in Taktser, Tibet)
6	Subrahmanyan Chandrasekhar	Physics	1983	United States (born in Lahore, British India)
7	Mother Teresa	Peace	1979	India (born in Skopje, North Macedonia)
8	Har Gobind Khorana	Physiology or Medicine	1968	United States (born in Raipur, British India)
9	C. V. Raman	Physics	1930	Tamil Nadu, India
10	Rabindranath Tagore	Literature	1913	West Bengal, India
11	Rudyard Kipling	Literature	1907	United Kingdom (born in Bombay, British India)
12	Ronald Ross	Physiology or Medicine	1902	United Kingdom (born in Almora, British India)

Additional Details

Year	Image	Laureate	Born	Died	Field	Citation
Citizens of the British India						
1913		Rabindranath Tagore (Khulna district, Bengal, now Bangladesh)	7 May 1861 Kolkata, Bengal, now West Bengal	7 August 1941 Kolkata, Bengal, now West Bengal	Literature	"because of his profoundly sensitive, fresh and beautiful verse, by which, with consummate skill, he has made his poetic thought, expressed in his own English words, a part of the literature of the West."
1930		Chandrasekhara Venkata Raman (Thanjavur district, Madras, now Tamil Nadu)	7 November 1888 Tiruchirapalli, Madras, now Tamil Nadu	21 November 1970 Bangalore, Karnataka	Physics	"for his work on the scattering of light and for the discovery of the effect named after him."[10]
Citizens of India						
1979		Teresa Bojaxhiu, M.C. (Ottoman, now North Macedonia)	26 August 1910 Skopje, Ottoman, now North Macedonia	5 September 1997 Kolkata, West Bengal	Peace	"for her work for bringing help to suffering humanity."

Year	Image	Laureate	Born	Died	Field	Citation
1998		Amartya Sen (Dhaka district, Bengal, now Bangladesh)	3 November 1933 Santiniketan, Bolpur, Bengal, now West Bengal	—	Economics	"for his contributions to welfare economics."
2014		Kailash Satyarthi (Vidisha district, Madhya Pradesh)	11 January 1954 Vidisha, Madhya Pradesh	—	Peace	"for their struggle against the suppression of children and young people and for the right of all children to education." (awarded together with Pakistani activist Malala Yousafzai)
Diaspora						
1968		Har Gobind Khorana (Multan district, Punjab, now Pakistan's Punjab)	9 January 1922 Raipur, Punjab, now Pakistan's Punjab	9 November 2011 Concord, Massachusetts, United States	Physiology or Medicine	"for their interpretation of the genetic code and its function in protein synthesis." (awarded together with American biochemists Marshall W. Nirenberg and Robert W. Holley)
1983		Subrahmanyan Chandrasekhar (Thanjavur district, Madras, now Tamil Nadu)	19 October 1910 Lahore, Punjab, now Pakistan's Punjab	21 August 1995 Chicago, Illinois, United States	Physics	"for his theoretical studies of the physical processes of importance to the structure

Year	Image	Laureate	Born	Died	Field	Citation
						and evolution of the stars." (awarded together with American astrophysicist William Alfred Fowler)
2001		Vidiadhar Surajprasad Naipaul (Gorakhpur district, United Province, now Uttar Pradesh)	17 August 1932, Chaguanas Borough Corporation, Trinidad and Tobago	11 August 2018, London, United Kingdom	Literature	
2009		Venkatraman "Venki" Ramakrishnan (Cuddalore district, Tamil Nadu)	1 April 1952 Chidambaram, Tamil Nadu	—	Chemistry	"for studies of the structure and function of the ribosome." (awarded together with American biochemist Thomas A. Steitz and Israeli crystallographer Ada Yonath)
2019		Abhijit Banerjee (Hooghly district, West Bengal)	21 February 1961 Mumbai, Maharashtra	—	Economics	"for their experimental approach to alleviating global poverty" (awarded together with his wife Esther Duflo and American economist Michael Kremer)
Expatriates						

Year	Image	Laureate	Born	Died	Field	Citation
1902		Ronald Ross	13 May 1857 Almora, Uttarakhand	16 September 1932 London, United Kingdom	Physiology or Medicine	"for his work on malaria, by which he has shown how it enters the organism and thereby has laid the foundation for successful research on this disease and methods of combating it."
1907		Joseph Rudyard Kipling	30 December 1865 Malabar Hill, South Mumbai, Maharashtra	18 January 1936 London, United Kingdom	Literature	"in consideration of the power of observation, originality of imagination, virility of ideas and remarkable talent for narration which characterize the creations of this world-famous author."

Also visit these web links to know MORE!

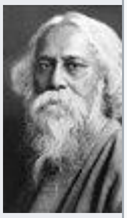
01] https://vajiramandravi.com/quest-upsc-notes/nobel-prize-winners-in-india/

02] https://en.wikipedia.org/wiki/List_of_Indian_Nobel_laureates

03] https://www.careerpower.in/indian-nobel-prize-winners.html

04] https://currentaffairs.adda247.com/list-of-indian-nobel-laureates/

05] https://www.livemint.com/web-stories/list-of-indian-nobel-laureates-19132023-11696509286980.html

Year	Image	Laureate	Born	Died	Field	Citation
Citizens of British India						
1913		Rabindranath Tagore (Khulna district, Bengal, now Bangladesh)	7 May 1861 Kolkata, Bengal, now West Bengal	7 August 1941 Kolkata, Bengal, now West Bengal	Literature	"because of his profoundly sensitive, fresh and beautiful verse, by which, with consummate skill, he has made his poetic thought, expressed in his own English words, a part of the literature of the West."[9]
1930		Chandrasekhara Venkata Raman (Thanjavur district, Madras, now Tamil Nadu)	7 November 1888 Tiruchirapalli, Madras, now Tamil Nadu	21 November 1970 Bangalore, Karnataka	Physics	"for his work on the scattering of light and for the discovery of the effect named after him."[10]
Citizens of India						
1979		Teresa Bojaxhiu, M.C. (Ottoman, now North Macedonia)	26 August 1910 Skopje, Ottoman, now North Macedonia	5 September 1997 Kolkata, West Bengal	Peace	"for her work for bringing help to suffering humanity."[11]

Year	Image	Laureate	Born	Died	Field	Citation
1998		Amartya Sen (Dhaka district, Bengal, now Bangladesh)	3 November 1933 Santiniketan, Bolpur, Bengal, now West Bengal	—	Economics	"for his contributions to welfare economics."[12]
2014		Kailash Satyarthi (Vidisha district, Madhya Pradesh)	11 January 1954 Vidisha, Madhya Pradesh	—	Peace	"for their struggle against the suppression of children and young people and for the right of all children to education."[13] (awarded together with Pakistani activist Malala Yousafzai)
Diaspora[a]						
1968		Har Gobind Khorana (Multan district, Punjab, now Pakistan's Punjab)	9 January 1922 Raipur, Punjab, now Pakistan's Punjab	9 November 2011 Concord, Massachusetts, United States	Physiology or Medicine	"for their interpretation of the genetic code and its function in protein synthesis."[14] (awarded together with American biochemists Marshall W. Nirenberg and Robert W. Holley)
1983		Subrahmanyan Chandrasekhar (Thanjavur district, Madras, now Tamil Nadu)	19 October 1910 Lahore, Punjab, now Pakistan's Punjab	21 August 1995 Chicago, Illinois, United States	Physics	"for his theoretical studies of the physical processes of importance to the

Year	Image	Laureate	Born	Died	Field	Citation
						structure and evolution of the stars."[15] (awarded together with American astrophysicist William Alfred Fowler)
2001		Vidiadhar Surajprasad Naipaul (Gorakhpur district, United Province, now Uttar Pradesh)	17 August 1932, Chaguanas Borough Corporation, Trinidad and Tobago	11 August 2018, London, United Kingdom	Literature	
2009		Venkatraman "Venki" Ramakrishnan (Cuddalore district, Tamil Nadu)	1 April 1952 Chidambaram, Tamil Nadu	—	Chemistry	"for studies of the structure and function of the ribosome."[16] (awarded together with American biochemist Thomas A. Steitz and Israeli crystallographer Ada Yonath)
2019		Abhijit Banerjee (Hooghly district, West Bengal)	21 February 1961 Mumbai, Maharashtra	—	Economics	"for their experimental approach to alleviating global poverty" (awarded together with his wife Esther Duflo and American economist Michael Kremer)

Expatriates						
1902		Ronald Ross	13 May 1857 Almora, Uttarakhand	16 September 1932 London, United Kingdom	Physiology or Medicine	"for his work on malaria, by which he has shown how it enters the organism and thereby has laid the foundation for successful research on this disease and methods of combating it."[17]
1907		Joseph Rudyard Kipling	30 December 1865 Malabar Hill, South Mumbai, Maharashtra	18 January 1936 London, United Kingdom	Literature	"in consideration of the power of observation, originality of imagination, virility of ideas and remarkable talent for narration which characterize the creations of this world-famous author."[1

Nominees[edit]

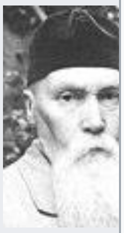
Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
Peace						
	Nicholas Roerich	19 October 1874 in Saint Petersburg, Russia	13 December 1947 in Naggar, Himachal Pradesh, India	1929	"for his dedication to the cause of preserving art and architecture during times of war."[19]	Georges Chklaver[b] (1897–1970) Switzerland
				1933		Mikhail von Taube[c] (1869–1961) Russia
				1935		Henry Pratt Fairchild (1880–1956) United States
						Sol Bloom (1870–1949) United States

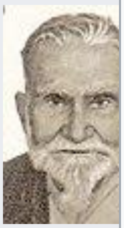
Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
	Annie Wood Besant	1 October 1847 in Clapham, England, United Kingdom	20 September 1933 in Adyar, Chennai, Tamil Nadu, India	1931	"for having been actively involved in educational and humanitarian work in India, establishing the Indian Home Rule League and for her efforts to solve the Indian "problem", thereby securing world peace by uniting East and West."[20]	Peter Freeman (1888–1956) United Kingdom
	Raja Mahendra Pratap	1 December 1886 in Mursan, Uttar Pradesh, India	29 April 1979 in Madras, Tamil Nadu, India	1932	"for travelling around the world to create awareness about the situation in Afghanistan and India."[21]	Nils August Nilsson (1860–1940) Sweden
	Mohandas Karamchand Gandhi	2 October 1869 Porbandar, Gujarat	30 January 1948 New Delhi, Delhi	1937, 1938, 1939, 1947, 1948	[22]	• Ole Colbjørnsen (1897–1973) • B. G. Kher (1888–1957) • Mavalankar (1888–1956) • Govind Ballabh Pant (1887–1961) • Emily Greene Balch (1867–1961) • Christian S. Oftedal (1907–1955) • American Friends Service Committee • 5 professors of Philosophy at Columbia

Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
						University (Herbert Schneider) - 6 Professors of Law at the University of Bordeaux (Maurice Duverger) - Frede Castberg (1893–1977)
			Physics			
	Chandrasekhara Venkata Raman	7 November 1888 Tiruchirapalli, Tamil Nadu	21 November 1970 Bangalore, Karnataka	1929, 1930	"for his work in the field of light scattering and the discovery of a modified scattering called Raman effect."[23]	- Charles Fabry (1867–1945) - Niels Bohr (1885–1962) - Jean Baptiste Perrin (1870–1942) - Orest Khvolson (1852–1934) - Eugene Bloch (1878–1944) - Louis de Broglie (1892–1987) - Maurice de Broglie (1875–1960) - Richard Pfeiffer (1858–1945) - Ernest Rutherford (1871–1937) - Johannes Stark (1874–1957) - Charles Thomas Wilson (1869–1959)

Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
	Meghnad Saha	6 October 1893 Dhaka, Bangladesh	16 February 1956 New Delhi	1930, 1937, 1939, 1940, 1951, 1955	"for developing the Saha ionization equation, used to describe chemical and physical conditions in stars."[24]	• Debendra Mohan Bose (1885–1975) • Sisir Kumar Mitra (1890–1963) • Arthur Compton (1892–1962)
	Arthur Edwin Kennelly*	17 December 1861 Colaba, Mumbai, Maharashtra	18 June 1939 Boston, Massachusetts, United States	1935	"for his contributions to the theory of electrical transmission and to the development of international electrical standards."[25]	• John Macgregor-Morris (1872–1959) • Hans Zickendraht (1881–1956)
	Homi Jehangir Bhabha	30 October 1909 Mumbai, Maharashtra	24 January 1966 Mont Blanc, Alps, France	1951, 1953, 1954, 1955, 1956	"for his discovery of the cascade process of cosmic radiation and Bhabha Scattering in quantum electrodynamics."[26]	Jacques Hadamard (1865–1963)
	Satyendra Nath Bose	1 January 1894 Kolkata, West Bengal	4 February 1974 Kolkata, West Bengal	1956, 1959, 1962, 1968, 1969	"for developing the foundation for Bose statistics and the theory of the Bose condensate in quantum mechanics."[27]	• Kedareswar Banerjee (1900–1975) • Daulat Singh Kothari (1906–1993) • Shibapratim Bagchi (?) • Anindya Dutta (?) • M. G. K. Menon (1928–2016)
	Robert Hanbury Brown*	31 August 1916 Aruvankadu, Tamil Nadu	16 January 2002 Andover, Hampshire, United Kingdom	1965, 1966	"for developing the Hanbury Brown and Twiss effect leading to the creation of intensity interferometers."[28][29]	• Emil Wolf (1922–2018) • Louis de Broglie (1892–1987)

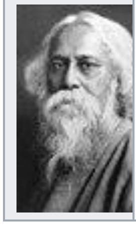
Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
	Richard Quinn Twiss*	24 August 1920 Shimla, Himachal Pradesh	20 May 2005 Sydney, Australia			
Chemistry						
	Roger John Williams*	14 August 1893 Ooty, Tamil Nadu	20 February 1988 Austin, Texas, United States	1960	"for his work on vitamins, particularly on discovering and isolating vitamin B6, lipoic acid, and avidin."[30]	- William Shive (1916–2001) - Richard Ronald Eakin (b. 1938) - Lowell Reed (1886–1966)
	Gopalasamudram Narayanan Ramachandran	8 October 1922 Ernakulam, Kerala	7 April 2001 Chennai, Tamil Nadu	1964	"for developing the Ramachandran plot for understanding peptide structure."[31]	Chandrasekhara Venkata Raman (1888–1970)
	Thiruvengadam Rajendram Seshadri	3 February 1900 Kulithalai, Tamil Nadu	27 September 1975 New Delhi	1966, 1968	"for his research on oxygen heterocyclic compounds."[32]	- N. Subba Rao (?) - B. Jain (?)
Literature						
	Joseph Rudyard Kipling*	30 December 1865 Malabar Hill, South Mumbai, Maharashtra	18 January 1936 London, United Kingdom	1903, 1904, 1905, 1907	[33]	- Edwin Arnold (1832–1904) - William John Loftie (1839–1911) - Charles Oman (1860–1946)
	Rabindranath Tagore	7 May 1861 Kolkata, West Bengal	7 August 1941 Kolkata, West Bengal	1913	[34]	Thomas Sturge Moore (1870–1944)

Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
	Rabindranath Datta	1 October 1883 Kolkata, West Bengal	6 July 1917 Kolkata, West Bengal	1916	[35]	• Mano Gangedy (?) • Raya Yatindra Chondhury (?)
	Sarvepalli Radhakrishnan	5 September 1888 Thiruttani, Tamil Nadu	17 April 1975 Chennai, Tamil Nadu	1933, 1934, 1935, 1936, 1937, 1952, 1956, 1957, 1958, 1960, 1961, 1962, 1963	[36]	• Hjalmar Hammarskjöld (1862–1953) • The Indian PEN-Club • Nirmal Kumar Sidhanta (1929–2014) • Hywel Lewis (1910–1992) • Arthur John Arberry (1905–1969) • Suniti Kumar Chatterji (1890–1977)
	James Cousins*	22 July 1873 Belfast, Northern Ireland	20 February 1956 Madanapalle, Andhra Pradesh	1935	[37]	Rabindranath Tagore (1861–1941)
	Hari Mohan Banerjee			1936	[38]	Devadatta Ramakrishna Bhandarkar (1875–1950)
	Bensadhar Majumdar			1937, 1939	[39]	• Sen Satyendranath (1909–?) • Mukundadeb Chatterjee (?)

Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
	Mohammad Hosain Khan (*probably Mohammad Habib (1895–1971)*)			1938	[40]	Per Hallström (1866–1960)
	Sanjib Chaudhuri			1938, 1939	[41]	• Mahmud Hasan (1897–1944) • R. K. Danungo (?)
	Sri Aurobindo Ghose	15 August 1872 Kolkata, West Bengal	5 December 1950 Pondicherry, Union Territory of Puducherry	1943	[42]	Francis Younghusband (1863–1942)
	Sachidananda Routray	13 May 1916 Gurujang, Odisha	21 August 2004 Cuttack, Odisha	1959	[43]	Radhakamal Mukerjee (1889–1968)
	Lawrence Durrell*	27 February 1912 Jalandhar, Punjab	7 November 1990 Sommières, Gard, France	1961, 1962, 1963, 1964, 1965, 1966, 1967, 1969, 1971	[44]	• Hjalmar Gullberg (1898–1961) • Wolfgang Iser (1926–2007) • Paul Verniére (1916–1997) • Erich Burck (1901–1994) • Georg Luck (1926–2013) • Paul Gerhard Buchloh (1922–1986) • Henry Olsson (1896–1985) • Harald Patzer (1910–2005)

Image	Laureate	Born	Died	Years Nominated	Citation	Nominator(s)
						• Haydn Trevor Mason (1929–2018)
	Gopal Singh	29 November 1917 Panaji, Goa	8 August 1990 Panaji, Goa	1965	[45]	• Karl Ragnar Gierow (1904–1982) • Henrik Samuel Nyberg (1889–1974)
	Tarasankar Bandyopadhyay	27 July 1898 Labhpur, West Bengal	14 September 1971 Kolkata, West Bengal	1971	[46]	Krishna Kripalani (1907–1992)

Malala Yousafzai

[https://www.nobelprize.org/prizes/peace/2014/yousafzai/facts/]

Malala Yousafzai
The Nobel Peace Prize 2014
Born: 12 July 1997, Mingora, Pakistan
Residence at the time of the award: United Kingdom
Prize motivation: "for their struggle against the suppression of children and young people and for the right of all children to education"
Prize share: 1/2

For the right of every child to receive an education

Malala Yousafzai was awarded the Nobel Peace Prize for her fight for the right of every child to receive an education. She was born in the Swat Valley in Pakistan. When the Islamic Taliban movement took control of the valley in 2008, girls' schools were burned down. Malala kept a diary of the events, which was published in 2009 by BBC Urdu. In her diary she spoke out against the Taliban's terrorist regime. An American documentary film made Malala internationally famous.

It was not long before the Taliban threatened her life. In 2012, Malala was shot in the head on a school bus by a Taliban gunman. She survived, but had to flee to England and live in exile there because a fatwa was issued against her.

In 2013, TIME magazine named Malala one of "**The 100 Most Influential People in the World.**" On her 16th birthday she spoke in the United Nations. In her speech Malala called for the equal right to education for girls all over the world, and became a symbol of this cause.

https://www.un.org/en/messengers-peace/malala-yousafzai

Her Interview to United Nations

https://news.un.org/en/story/2017/10/567872-interview-fighting-girls-education-un-advocate-malala-yousafzai-finds-her

Brief Profile

Malala Yousafzai

By Kerri Lee Alexander, NWHM Fellow | 2018-2020

At age eleven, Malala Yousafzai was already advocating for the rights of women and girls. As an outspoken proponent for girls' right to education, Yousafzai was often in danger because of her beliefs. However, even after being shot by the Taliban, she continued her activism and founded the Malala Fund with her father. By age seventeen, Yousafzai became the youngest person to receive the Nobel Peace Prize for her work.

Malala Yousafzai was born on July 12, 1997 in Mingora, Pakistan. Mingora is the largest city in the Swat Valley of the Khyber Pakhtunkhwa Province in Pakistan. Yousafzai was the first of three children born to Ziauddin and Tor Pekai Yousafzai. Although it was not always easy to raise a girl child in Pakistan, Malala Yousafzai's father insisted that she received all of the same opportunities afforded to boy children. Her father was a teacher and education advocate that ran a girls' school in their village. Due to his influence, Yousafzai was passionate about knowledge from a very young age, and she would often waddle into her father's classes before she could even talk. However, by the time she was ten years old, Taliban extremists began to take control of the Swat Valley and many of her favorite things were banned. Girls were no longer able to attend school, and owning a television, playing music and dancing were all prohibited. Girl's education was specifically targeted by the Taliban and by the end of 2008 they had destroyed over 400 schools. At eleven years old, Yousafzai decided to stand up to the Taliban.

Yousafzai started by blogging anonymously for the British Broadcasting Corporation (BBC) in early 2009. She used the penname, "Gul Makai," and spoke about her life under Taliban rule and how much she wanted to attend school. Her first BBC diary entry entitled, "I Am Afraid," detailed her nightmares about a full-blown war in her hometown. Her nightmares started to become reality, as Yousafzai and her family were soon forced to leave their home due to rising tensions between Pakistan and the Taliban. This did not stop Yousafzai from advocating for her right to attend school. Over the next few years, she and her father began speaking out on behalf of girls' education in the media. They campaigned for Pakistani girls' access to a free quality education. By 2011, Yousafzai was nominated for the International Children's Peace Prize. Although she did not win, that same year she earned Pakistan's National Youth Peace Prize. Yousafzai was now a household name. However, this also made her a target.

On October 9, 2012, fifteen-year old Yousafzai was on the bus returning from school with her friends. Two members of the Taliban stopped the bus and asked, "Who is Malala?"

When they identified Yousafzai, they shot her in the head. Fortunately, she was airlifted to a Pakistani military hospital and then taken to an intensive care unit in England. After ten days in a medically induced coma, Yousafzai woke up in a hospital in Birmingham, England. She had suffered no major brain damage, but the left side of her face was paralyzed, and she would require many reparative surgeries and rehabilitation. After months of medical treatment, Yousafzai was able to return to her family that now lived in England. In March 2013, Yousafzai began attending school in Birmingham. Although she was now able to attend school in England, she decided to keep fighting "until every girl could go to school." On her sixteenth birthday, Yousafzai spoke at the United Nations in New York. That same year she published her autobiography entitled, "I Am Malala: The Girl Who Stood Up for Education and Was Shot by the Taliban." She was awarded the Sakharov Prize for Freedom of Thought by the European Parliament for her activism.

In 2014, Yousafzai and her father established the Malala Fund to internationally support and advocate for women and girls. Through her charity, she met with Syrian refugees in Jordan, young women students in Kenya, and spoke out in Nigeria against the terrorist group Boko Haram that abducted young girls to stop them from going to school. In December of 2014, Yousafzai was awarded the Nobel Peace Prize for her work. At age seventeen, she became the youngest person to be named a Nobel laureate. Since then, Yousafzai has continued to advocate for the rights of women and girls. The Malala Fund advocates for quality education for all girls by funding education projects internationally, partnering with global leaders and local advocates, and pioneering innovative strategies to empower young women. Yousafzai is currently studying Philosophy, Politics and Economics at the University of Oxford.

****

She speaks!

1997

I was born in Mingora, Pakistan on July 12, 1997.
Welcoming a baby girl is not always cause for celebration in Pakistan — but my father, Ziauddin Yousafzai, was determined to give me every opportunity a boy would have.

2008

My father was a teacher and ran a girls' school in our village.
I loved school. But everything changed when the Taliban took control of our town in Swat Valley. The extremists banned many things — like owning a television and playing music — and enforced harsh punishments for those who defied their orders. And they said girls could no longer go to school.

In January 2008 when I was just 11 years old, I said goodbye to my classmates, not knowing when — if ever — I would see them again.

2012

I spoke out publicly on behalf of girls and our right to learn. And this made me a target.
In October 2012, on my way home from school, a masked gunman boarded my school bus and asked, "Who is Malala?" He shot me on the left side of my head.

I woke up 10 days later in a hospital in Birmingham, England. The doctors and nurses told me about the attack — and that people around the world were praying for my recovery.

2014

After months of surgeries and rehabilitation, I joined my family in our new home in the U.K. It was then I knew I had a choice: I could live a quiet life or I could make the most of this new life I had been given. I determined to continue my fight until every girl could go to school.

With my father, who has always been my ally and inspiration, I established Malala Fund, a charity dedicated to giving every girl an opportunity to achieve a future she chooses. In recognition of our work, I received the Nobel Peace Prize in December 2014 and became the youngest-ever Nobel laureate.

2018

I began studying Philosophy, Politics and Economics at the University of Oxford. And every day I fight to ensure all girls receive 12 years of free, safe, quality education.

I travel to many countries to meet girls fighting poverty, wars, child marriage and gender discrimination to go to school. Malala Fund is working so that their stories, like mine, can be heard around the world.

We invest in developing country educators and activists, like my father, through Malala Fund's Education Champion Network. And we hold leaders accountable for their promises to girls.

2020

I graduated from Oxford University!
I will always treasure my time at Lady Margaret Hall — the lectures, club meetings, balls and late nights (some spent finishing papers, some just chatting with friends in the dorm). Although a global pandemic meant I spent my final months as a university student in my parents' house, I'm grateful that I was able to complete my education. After taking time to relax, I am more dedicated than ever to my fight for girls.

With more than 130 million girls out of school today, there is more work to be done. I hope you will join my fight for education and equality. Together, we can create a world where all girls can learn and lead.

https://malala.org/malalas-story

List of Awards & Honours Received by Malala Yousafzai

Resource:

https://www.jagranjosh.com/general-knowledge/malala-day-2023-1689127080-1

Year	Awards & Honours
2011	International Children's Peace Prize (nominee)
2011	National Youth Peace Prize
January 2012	Anne Frank Award for Moral Courage
October 2012	Sitara-e-Shujaat, Pakistan's second-highest civilian bravery award
November 2012	Foreign Policy magazine's top 100 global thinker
December 2012	Time Magazine Person of the Year shortlist for 2012
November 2012	Mother Teresa Awards for Social Justice
December 2012	Rome Prize for Peace and Humanitarian Action

January 2013	Top Name in Annual Survey of Global English in 2012
January 2012	Simone de Beauvoir Prize
March 2013	Memminger Freiheitspreis 1525 (conferred on 7 December 2013 in Oxford)
March 2013	Doughty Street Advocacy Award of Index on Censorship
March 2013	Fred and Anne Jarvis Award of the UK National Union of Teachers
April 2013	Vital Voices Global Leadership Awards, Global Trailblazer
April 2013	One of *Time*'s "100 Most Influential People in the World"
May 2013	Premi Internacional Catalunya Award of Catalonia, May 2013
June 2013	Annual Award for Development of the OPEC Fund for International Development (OFID)
June 2013	International Campaigner of the Year, 2013 Observer Ethical Awards
August 2013	Tipperary International Peace Award for 2012, Ireland Tipperary Peace Convention
2013	Portrait of Yousafzai by Jonathan Yeo displayed at National Portrait Gallery, London
September 2013	Ambassador of Conscience Award from Amnesty International
2013	International Children's Peace Prize
2013	Clinton Global Citizen Awards from Clinton Foundation
September 2013	Harvard Foundation's Peter Gomes Humanitarian Award from Harvard University
2013	Anna Politkovskaya Award – Reach All Women in War
2013	Reflections of Hope Award – Oklahoma City National Memorial & Museum
2013	Sakharov Prize for Freedom of Thought – awarded by the European Parliament
2013	Honorary Master of Arts degree awarded by the University of Edinburgh
2013	Pride of Britain (October)
2013	Glamour magazine Woman of the Year
2013	GG2 Hammer Award at GG2 Leadership Awards (November)
2014	International Prize for Equality and Non-Discrimination
2014	Awarded the World Children's Prize also known as Children's Nobel Prize
2014	Awarded Honorary Life Membership by the PSEU (Ireland)
2014	Skoll Global Treasure Award
2014	Honorary Doctor of Civil Law, University of King's College, Halifax, Nova Scotia, Canada

2014	2014 Nobel Peace Prize, shared with Kailash Satyarthi
2014	Philadelphia Liberty Medal
2014	Asia Game Changer Award
2014	One of Time Magazine "The 25 Most Influential Teens of 2014"
2014	Honorary Canadian citizenship
2015	Asteroid 316201 Malala named in her honour.
2015	The audio version of her book *I Am Malala* wins a Grammy Award for Best Children's Album.
2016	Honorary President of The Students' Union of the University of Sheffield
2016	Order of the Smile
2017	Youngest ever United Nations Messenger of Peace
2017	Received an honorary doctorate from the University of Ottawa
2017	Ellis Island International Medal of Honor
2017	Wonk of the Year 2017 from American University
2017	Harper's Bazaar inducted Malala in the list of "150 of the most influential female leaders in the UK"
2017	Advisor to Princess Zebunisa of Swat, Swat Relief Initiative Foundation, Princeton, New Jersey
2018	Gleitsman Award from the Center for the Public Leadership at Harvard Kennedy School
2019	For their first match of March 2019, the women of the United States women's national soccer team each wore a jersey with the name of a woman they were honouring, on the back; Carli Lloyd chose the name of Yousafzai.
2022	Elected World's Children's Prize Decade Child Rights Hero.
2023	Invited to Met Gala

****

Malala Yousafzai

Nobel Prize presentation

https://www.nobelprize.org/prizes/peace/2014/yousafzai/prize-presentation/

Watch a video clip of the 2014 Nobel Peace Prize Laureate, Malala Yousafzai, receiving her Nobel Prize medal and diploma during the **Nobel Peace Prize Award Ceremony** at the Oslo City Hall in Norway, 10 December 2014.

NOBEL TRIUMVIRS - 2011

&

OUR UNIVERSITY

(😊)(😊)(😊)(😊)(😊)(😊)(😊)(😊)(😊)

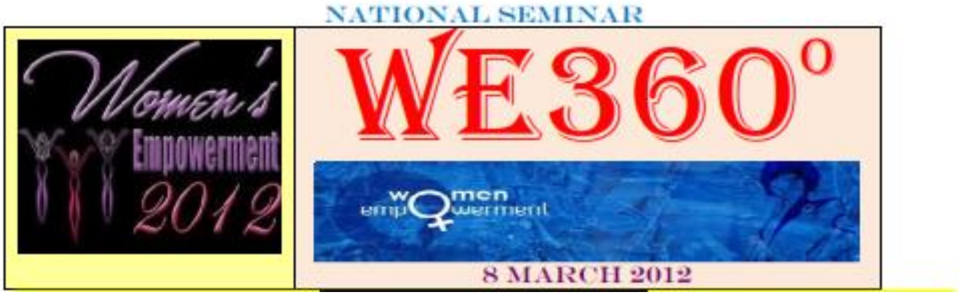
Honouring these THREE
Nobel Laureates

Faculty of Management Studies
conducted a Seminar

"WE 360°"

on the eve of International Women's Day 2012

IN THE GLORY OF
NOBEL TRIUMVIRS - 2011
Ellen Johnson-Sirleaf :: Leymah Gbowee :: Tawakkul Karman

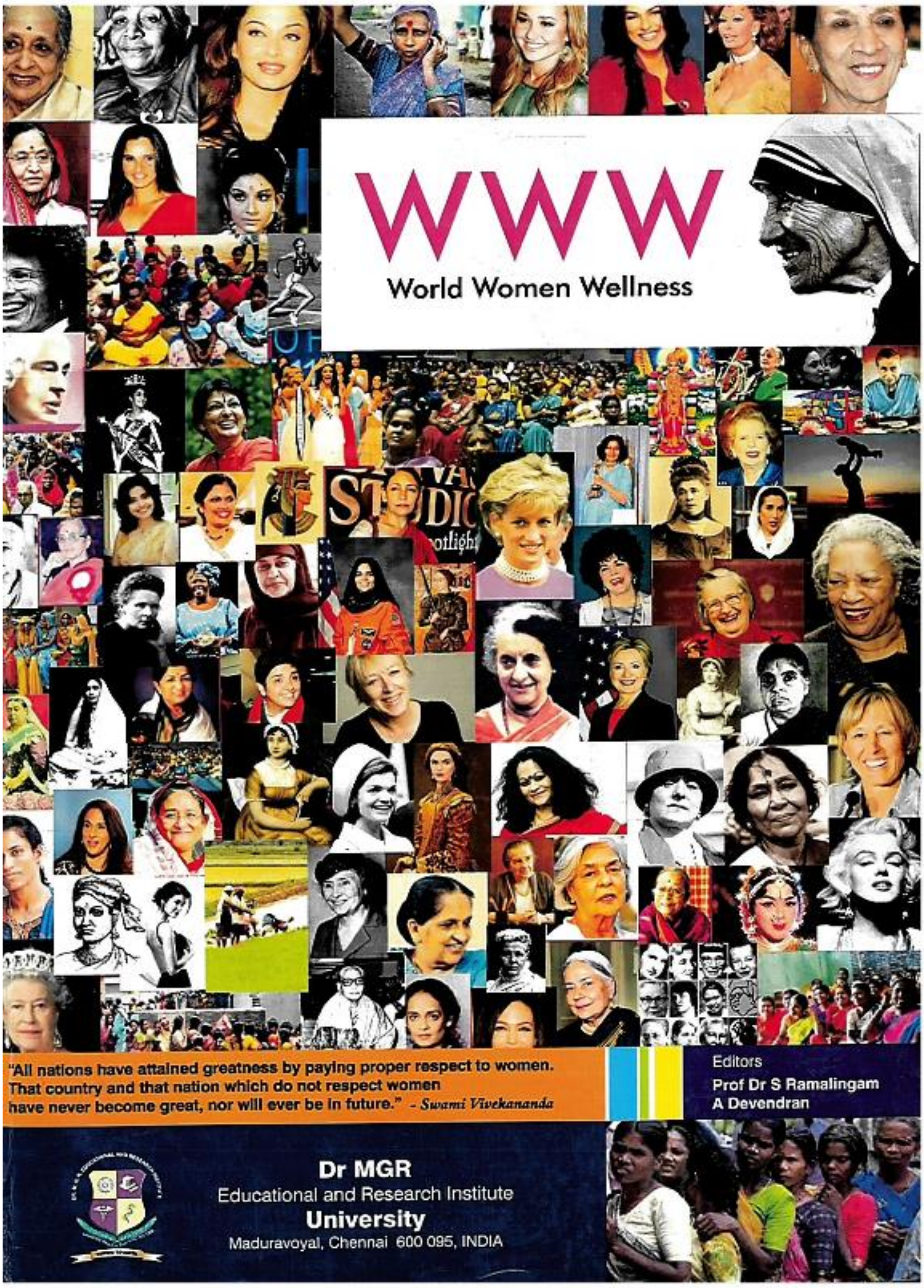


During the Seminar a Book

"World Women Wellness"

[ISBN 978-81-910827-6-0]

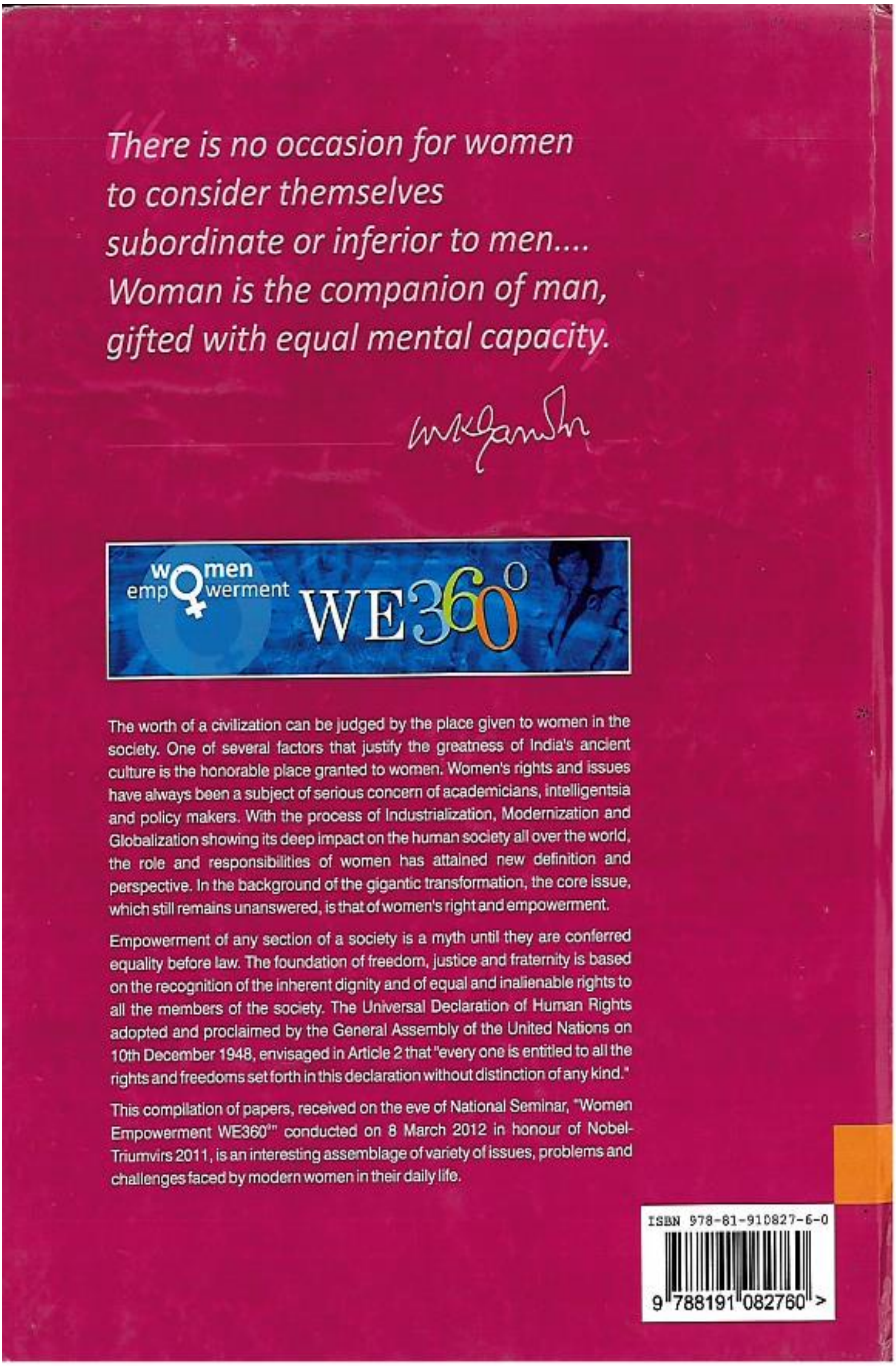
was published
containing 87 papers in
TEN major themes



"All nations have attained greatness by paying proper respect to women. That country and that nation which do not respect women have never become great, nor will ever be in future." - *Swami Vivekananda*

Editors
Prof Dr S Ramalingam
A Devendran

Dr MGR
Educational and Research Institute
University
Maduravoyal, Chennai 600 095, INDIA



> *There is no occasion for women to consider themselves subordinate or inferior to men.... Woman is the companion of man, gifted with equal mental capacity.*
>
> mkgandhi

women empowerment WE360°

The worth of a civilization can be judged by the place given to women in the society. One of several factors that justify the greatness of India's ancient culture is the honorable place granted to women. Women's rights and issues have always been a subject of serious concern of academicians, intelligentsia and policy makers. With the process of Industrialization, Modernization and Globalization showing its deep impact on the human society all over the world, the role and responsibilities of women has attained new definition and perspective. In the background of the gigantic transformation, the core issue, which still remains unanswered, is that of women's right and empowerment.

Empowerment of any section of a society is a myth until they are conferred equality before law. The foundation of freedom, justice and fraternity is based on the recognition of the inherent dignity and of equal and inalienable rights to all the members of the society. The Universal Declaration of Human Rights adopted and proclaimed by the General Assembly of the United Nations on 10th December 1948, envisaged in Article 2 that "every one is entitled to all the rights and freedoms set forth in this declaration without distinction of any kind."

This compilation of papers, received on the eve of National Seminar, "Women Empowerment WE360°" conducted on 8 March 2012 in honour of Nobel-Triumvirs 2011, is an interesting assemblage of variety of issues, problems and challenges faced by modern women in their daily life.

ISBN 978-81-910827-6-0
9 788191 082760 >

https://www.nobelprize.org/prizes/peace/2011/summary/

The Nobel Peace Prize 2011		
Ellen Johnson Sirleaf	Leymah Gbowee	Tawakkol Karman
Prize share: 1/3	**Prize share: 1/3**	**Prize share: 1/3**

The Nobel Peace Prize 2011 was awarded jointly to

Ellen Johnson Sirleaf, Leymah Gbowee and Tawakkol Karman

"for their non-violent struggle for the safety of women and for women's rights to full participation in peace-building work"

FOREWORD

Foreword

sex >> nature-driven
gender >> society-driven

There are many civilizations in the world where respect for women and their role in society are prominent and others where regard for them and their status should be improved. Yet the level of civility along with moral and spiritual standards in a society can often be perceived by the respect and regard it gives for its women. Not that it glorifies them for their sexuality and then gives them all the freedom men want so they can be exploited and taken advantage of, but that they are regarded in a way that allows them to live in honor for their importance in society with respect and protection, and given the opportunity to reach their real potential in life.

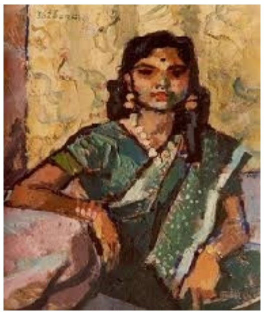
Among the many societies that can be found in the world, one could see that some of the most venerating regard for women has been found in Vedic culture. The Vedic tradition has held a high regard for the qualities of women, and has retained the greatest respect within its tradition.

The worth of a civilization can be judged by the place given to women in the society. One of several factors that justify the greatness of India's ancient culture is the honorable place granted to women. The foreign rule on India caused considerable deterioration in the status of women. They were deprived of their rights of equality with men. Raja Ram Mohan Roy started a movement against this inequality and subjugation. The contact of Indian culture with that of the British also brought improvement in the status of women. The third factor in the revival of women's position was the influence of Mahatma Gandhi who induced women to participate in the Freedom Movement. As a result of this retrieval of freedom, women in India have distinguished themselves as teachers, nurses, air-hostesses, booking clerks, receptionists, and doctors. They are also participating in politics and administration. But in spite of this amelioration in the status of women, the evils of illiteracy, dowry, ignorance, and economic slavery would have to be fully removed in order to give them their rightful place in Indian society.

The status of women in modern India is a sort of a paradox. If on one hand she is at the peak of ladder of success, on the other hand she is mutely suffering the violence afflicted on her by her own family members. As compared with past women in modern times have achieved a lot but in reality they have to still travel a long way. The women have left the secured domain of their home and are now in the battlefield of life, fully armored with their talent. They had proven themselves. But in India they are yet to get their dues. The sex ratio of India shows that the Indian society is still prejudiced against female. There are 940 females per thousand males in India according to the census of 2011, which is much below the world average of 990 females. There are many problems which women in India have to go through daily. These problems have become the part and parcel of life of Indian women.

Each year around the world, International Women's Day (IWD) is celebrated on March 8. Thousands of events occur not just on this day but throughout March to mark the economic, political and social achievements of women. Organisations, governments, charities and women's groups around the world choose different themes each year that reflect global and local gender issues.

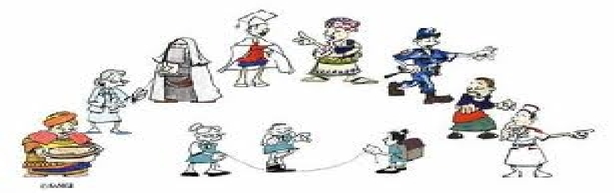
Few causes promoted by the United Nations have generated more intense and widespread support than the campaign to promote and protect the equal rights of women. The Charter of the United Nations, signed in San Francisco in 1945, was the first international agreement to proclaim gender equality as a fundamental human right. Since then, the Organization has helped create a historic legacy of internationally agreed strategies, standards, programmes and goals to advance the status of women worldwide. The theme of UN for this year's IWD is: "*Women and men united to end violence against women and girls."*



"Human rights are women's rights and women's rights are human rights" has become the mantra of women empowerment in the 21st century. In many countries, provisions guaranteeing the enjoyment of human rights without discrimination on the basis of sex havebeen included in constitutions; legal literacy and other measures have been introduced to alert women to their rights and to ensure their access to those rights; the world community has identified violence against women as a clear violation of women's rights; incorporating gender perspectives into regular programmes and policies has become a priority at the United Nations and in many member states. Although much remains to be done to achieve full equality, the voices of women are being heard. March 8th provides an opportunity to pay tribute to the achievements of women and to highlight the needs and concerns of women on regional, national and global agendas.

The Nobel Peace Prize 2011 was awarded jointly to three women, viz., Ellen Johnson Sirleaf, Leymah Gbowee and Tawakkol Karman *"for their non-violent struggle for the safety of women and for women's rights to full participation in peace-building work"*. Glorifying this great achievement of women, a National Seminar on '**Women Empowerment - WE360°** ' is organized by the Department of Management Studies, Dr MGR University, Chennai – 600 095 on 8 March 2012, being the 101st anniversary of IWD.

During the occasion a book entitled, *"**W**orld **W**omen **W**ellness"* containing around 90 papers on a variety of topics, such as Gender Inequality, Women & Children, Women & Marriage, Domestic Violence, Women's Education, Reproductive Health, Impact of Malnutrition, Women & Mass Media, Sexual Harassment, Feminism, Women's Literacy, Freedom of Action, Slutwalk, Gender Budgeting, etc. is being published. It is encouraging to see that more than two-third of the papers is contributed by women. Some of the papers are thought provoking and highlight the challenging tasks ahead.



I appreciate the efforts of bringing a wonderful volume like this and I do hope that all women, especially women activists and scholars associated with women studies would find this book interesting and useful.

26 January 2012
Chennai – 600 015

Dr A Kalyani
Vice-Chancellor
Tamilnadu Open University

Preface

Studies consistently show that *when women are supported and empowered, all of society benefits*.Their families are healthier, more children go to school, agricultural productivity improves and incomes increase. In short, communities become more resilient.

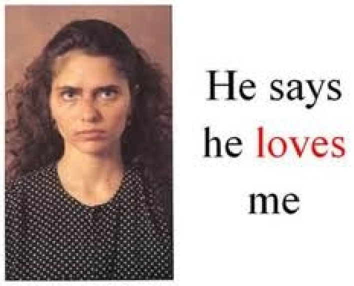
It may be noteworthy to know that while Harvard opened in 1636, the first college to admit women did not do so for another 200 years. Women did not begin attending college in equal numbers to men until as recently as 1980. Women are standing up everywhere and a great development progress has been made in the developed world. However, many places around the developing world are still there where Harvard was 200 years ago. People are standing up to close the gender gap.

Of the 1.3 billion people who live in absolute poverty around the globe, 70 percent are women. For these women, poverty doesn't just mean scarcity and want. It means rights denied, opportunities curtailed and voices silenced. Effective bottom-up strategies for ending hunger and poverty combine three factors: mobilizing people at the grassroots level to build self-reliance, empowering women as key change agents and forging effective partnerships with local government. Countries that do not capitalize on the full potential of one half of their societies are misallocating their human resources and undermining their competitive potential.The most pertinent fact is to accept that women have traditionally constituted the lesser developed half of Indian society, primarily because of lack of equal opportunity, social stigma, traditional thinking of confining women to household works and other such issues. In India, these come together in our Panchayati Raj Campaign. *Panchayati raj* refers to India's local democracy, based on elected local councils known as*panchayats.* The 73rd amendment to India's constitution, passed in 1993, mandates local elections every five years and reserves one-third of all seats for women.

Women and men differ in terms of biological make-up, power, status, norms and roles in society. WHO Member States and international agreements stress that these differences must be acknowledged analysed and addressed through gender analysis and actions. Without due attention to gender equality, health services, programmes, laws and policies will have limited effects. Women and men will not achieve their full health potential over the life-course. Furthermore, without achieving Millennium Development Goal 3 - gender equality and empowerment of women - the other MDGs will not be met by 2015.

Women were not being treated fairly in the workplace and the EEOC was unable to enforce the Civil Rights Act. So, in June 1966, while attending the Third National Conference on the Commission on the Status of Women in Washington, D.C., Betty Friedan and twenty-eight women founded the National Organization for Women (NOW). The purpose of the organization was "to take action to bring women into full participation in the mainstream of American society now, exercising all privileges and responsibilities thereof in true equal partnership with men". As the year's progressed, NOW's membership grew. By the time the organization was incorporated in 1967, the membership numbers were at 1037. As membership grew, so did the demonstrations, rallies, petitions and such that were designed to facilitate the spread of information on the purpose of the group. They boycotted the 1968 Miss America Beauty Contest in Atlantic City to let it be known that women's worth wasn't about their appearance. NOW was readily involved in multiple law suits against companies that violated a woman's right for equal opportunity employment.

Around the globe, home and community are not safe havens for a billion girls and women: At least one in three females on earth has been physically or sexually abused, often repeatedly and often by a relative or acquaintance. By the World Bank's estimate, violence rivals cancer as a cause of morbidity and mortality for women of childbearing age. Even within marriage, women may not be able to negotiate when and what type of sex to have, nor to protest their husbands' multiple sex partners. Poverty and exclusion push some girls and women to engage in sex work, almost always the desperate, last choice of people without other choices. The Women issues have received tremendous attention in the planning circle and in wide intellectual discussions and forums at national and global platforms. However the existing lacuna in the formulation and execution of the policies has not changed the grass root situation to a great extent. On the encouraging front, in the South Asian countries there have been relatively increasing economic participation in past one decade. Statistically the rate of literacy among Women has also increased. The educational and occupational patterns have also changed and widened with women entering the domains, which till decade back was considered to be dominated by men. Further there has been encouraging rise in the percentage of the women joining service sector especially banking and Information Technology. In the background of the gigantic transformation, the core issue, which still remains unanswered, is that of Women's right and empowerment.



UNDP focuses on gender equality and women's empowerment not only as human rights, but also because they are a pathway to achieving the Millennium Development Goals [MDG] and sustainable development. UNDP coordinates global and national efforts to integrate gender equality and women's empowerment into poverty reduction, democratic governance, crisis prevention and recovery, and environment and sustainable development. Through the global network, UNDP work to ensure that women have a real voice in all governance institutions, from the judiciary to the civil service, as well as in the private sector and civil society, so they can participate equally with men in public dialogue and decision-making and influence the decisions that will determine the future of their families and countries. When women, who have traditionally been denied a voice in decision-making, come to power, they transform the development agenda toward the human component - focusing on health, nutrition, education, water, sanitation and better family income. They tackle long-ignored problems such as domestic violence, alcoholism and corruption.

Women's rights took center stage on 10 December 2011 at the Nobel ceremonies as three women recognized for their struggles against the backdrops of the Arab Spring and democratic progress in Africa accepted this year's peace prize. Liberian President Ellen Johnson Sirleaf, and Leymah Gbowee, a social worker and peace campaigner from the same country, shared the prize with Tawakkul Karman, an activist and journalist who this year played a key opposition role in Yemen. The three were chosen for their non-violent struggle against injustice, sexual violence and repression.

Honouring this great achievement of these three women, the Department of Management Studies, Dr MGR University called for papers from the women of all walks of life and received more than 90 papers on a variety of topics widely covering several issues, challenges and problems faced by modern day women. These papers speak volumes of the struggle of the women globally even just to survive themselves and sustain their children and family.

The Department of Management of Studies do hope that this gesture would go in a long way to support all women to attain their wish and thus, help enhance the quality of life of global community.

The efforts of faculty of the Department of Management Studies, Dr MGR University in designing and executing the book are duly acknowledged.

Prof Dr S Ramalingam
Head – Management Studies
Dr MGR University
08 March 2012

prologue

"The emotional, sexual, and psychological stereotyping of females begins when the doctor says, *'It's a girl.'*"

These words of a doctor embed, empress, and enforce the common normative disposition towards the 'path of life' of a woman. It signals a discursive order in the name and terms of which gender establishes itself at the moment of birth and continues to exert itself, definitive of nearly every human experience. Gender at birth is at once the rebirth, the generation, of gender. It marks the course of women's life, their curriculum vitae.

The gender difference, as the oldest known difference inscribed into language, is seen as basic, unquestionable and unproblematic – a condition of life. It symbolically permeates all other dichotomies of thinking. The global patriarchal consensus about the submission of women to men, accordingly justifies other subjugations using the mechanism of symbolic analogy. The depiction of this state of affairs as natural is itself historic. This history of the social relations of genders is often obscured by replacement of social and historic relations with biological ones.

If gender is a constant, however, the ways in which gender is lived are highly fluid, subject to perpetual sociocultural redefinition and to individual interpretation and expression. In the papers presented here, an attempt is made to capture that transforming quality of gender as both a constraint upon the ways in which people do things, a barrier to free participation, and a palimpsest of creative expression through which cultural and social practices are worked our, contested, resisted, and often redefined. Gender has a wide range of primary expressions. It expresses itself through – sexuality, race, class, region, as well as other meaningful designations of human identity. Gender makes a difference not only because it sorts and categorizes humanity, but also because humanity is sorted and categorized by other discursive labels, such as class or race, by experiences of work, play, family, and civic life, which interact with gender to produce a wide variety of outcomes. This book attempts an endeavour to reflect and in multiple ways to represent, that variety.

Gender Identity Empowerment Coalition

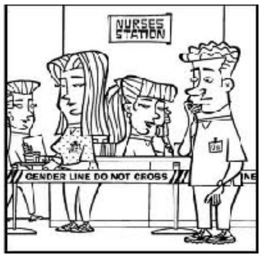
Women have been described as the fairer and the weaker sex in common phases all over the world. Lack of education, lack of opportunity in employment, least participation in decision making and nutritional stress are the common characteristics of a typical woman across the globe. The difference is only in degree and magnitude. Gender equality and empowerment of women are recognized globally as the key elements to achieve progress in all areas.

In any society women constitute almost 50% of the population and our country is no exception to that. Women in India are treated as a vulnerable section of the society. The traditional Indian society was patriarchal in character and hence patriarchal norms and values determine sexuality, reproduction and social production. These were expressed through specific culture metaphors. Overt rules and cover practices restricted women's activities and circumscribed their rights. Through a complex of ritual symbolism, messages of inferiority of women are clearly communicated and perpetuated. National mythologies draw on traditional gender roles and the nationalist narrative is filled with images of the nation as mother, wife, and maiden. Practices of nation-building employ social constructions of masculinity and femininity that support a division of labour in which women reproduce the nation physically and symbolically and men protect, defend, and avenge the nation.

Empowerment has multiple, interrelated and interdependent dimensions: economical, social, cultural and political. The political situation in the country has had its inevitable reaction on its educational system. It can be understood in relation to resources, perceptions, relationships and power. Ensuring equal access to economic resources, including land, credit, science and technology, vocational training, information, communication and markets would definitely advance the empowerment of women and girls.

Feminists continue to write, theorise and agitate about sexuality in terms of reproductive health, rape and domestic violence, caste and communal conflict worked out on the bodies of women, state violence that takes the form of sexual assault by army and police, and about the more quotidian forms of gender-violence as manifested in sexual harassment, especially in the work-place. Feminist scholarship has focused on the question of 'abducted women' and the manner in which both State and community were destablised by, and attempted to contain or live with, the sexuality of these women that fitted into neither conventional narratives of citizenship nor of community.

When feminists of the 'first wave' introduced the processes of gender contestation during the latter part of the nineteenth century, their purpose was explicitly political, with little backing from a body of theoretical texts. They were women of the modern era, sufficiently schooled in or confronted by the contradictions of Western thought to see the inequities presented by gendered life, in which men seemed to hold all the power and privilege and women seemed unable to fulfill ambitions beyond the narrow sphere of 'womanly' pursuits. They fought to break these bonds. Many analysts have noted the irony of the fact that the first-wave feminists and, in particular the 'Blue Stocking' activists for women's


NURSES STATION
GENDER LINE DO NOT CROSS
NE

suffrage were drawn almost exclusively from the middle class, without exception from among white women. Whereas, the second-wave feminism of the second half of the 20th century is marked by a broadly conscious commitment to link feminist social struggles with theoretical insight. Inspired by the great feminist writers, contemporary feminism is premised on the notion that we need to understand the concept of gender in order to change social relations. For decades, however, second-wave feminism rested on the assumption that 'gender' represents a socially constructed category overlaying a more fundamental biological category called 'sex'. This dualism ['sex' and 'gender'] is both dialectical and ironic. By invoking a distinction between sex and gender, early second-wave feminists were able to challenge some gendered practices, especially those surrounding work and careers, on the grounds that if these practices were man-made this also guaranteed their historical contingency. The recognition of women's equality was therefore a matter of choice, not biology. Not so, however, for matters concerning reproduction, which have remained much more firmly embedded in essentialist notions of how childbearing and motherhood limit women's spheres.

The Indian picture is highly pathetic. It is unfortunate but true, that every government in power has resorted to give a colour of sanctity to its political decisions and allowed the choas to continue. The recent trend is rather disturbing. Nobody should ignore the aspirations and yearning of people and all the parties must respect the desire of the people and take necessary steps to resolve peoples' problems including human rights violations. People cannot afford to wait a long period of time for solutions. These are achievable objectives, and if moral values are practised in a disciplined way then it will be of great help in bringing about the change. Government is trying to meet their expectations and change is in the air. The purpose of the restructuring is to accelerate growth in education. Everything depends upon the application of education and simple training for improving women's health condition. The pace of women's education will have to be accelerated so that women become aware of their rights, and are able to create what they choose.

I HEARD THIS IS THE BEST THING EVER HAPPENED TO EMPOWER US!
MEN AT WORK
WOMEN'S BILL
SATISH ACHARYA

It is a widely accepted fact that the development [of women] process in many parts of the world including India has bypassed women! Women's dependency is the major obstacle in women empowerment. Persistence of poverty, discriminatory attitudes towards women and girls, negative cultural attitudes and practices against girls and negative stereotyping of girls and boys are some of the major stumbling blocks to women empowerment. The biological division of humans into male and female is the basis for the most elementary social classification. In 1930, Simon Commission said: 'No document discussing India's constitutional system and the directions in which it could be developed could omit the women in India'. The Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles not only grants equality to women, but also empowers the state to adopt measures of positive discrimination in favour of women.

Mahatma Gandhi said: "A woman is not helpless, she must never regard herself as weaker than man; she should not, therefore, beg for any man's mercy, nor depend on him". Education and economic independence are two great tools. If a woman is independent of her financial sources, she has the power of money which gives material facilities required in modern society. So first of all financial freedom is a must for women empowerment. Confidence is the key for them taking up unconventional jobs. There is urgent need to motivate the womenfolk and instil in them the confidence to enable them as entrepreneurs to fulfill their role in the economic well being. There is a strong need for attitudinal change among the males as well as the females of our society.

Women, probably, are very much responsible for their condition and status they get in our society. They suffer because they keep silent and adjust themselves in any situation succumbing to the pressures of family and society. They do not share their problems, their dreams, their wishes and aspirations with their family members. They are afraid of the society, which has a habit of criticising every woman struggling for her position, but women should ignore such criticism.

WOMEN'S EMPOWERMENT

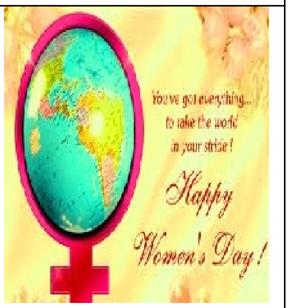
NO WOMEN NO PEACE.

Stree Shakti
INFINITE POSSIBILITIES

WWW

WORLD WOMEN WELLNESS

International
Women's
Day


You've got everything...
to take the world
in your stride!
Happy
Women's Day!

List of

CONTRIBUTORS

CONTENTS

CO

i Foreword

v Preface

ix Prologue

xiii List of Contributors

WOMEN AND HEALTH Part I

R Harini Hingnekar 001
WELFARE FOR WOMEN WORKFORCE
Details the various types of health hazards associated with working women and the necessary measures required to safeguard women.

Tiny Tanushree Gohain 004
UNWANTED PREGNANCY AND ABORTION
Indicates several situations and related issues connected to pregnancy and abortion with which women struggle seeking remedies.

S Anitha 008
MALNUTRITION IMPACTS ON HEALTH LEADING TO HIV IN WOMEN
Causes for malnutrition and the consequent health hazards leading to very serious sex related diseases are described.

Nafeesa Sultana Sayeed 011
WOMEN'S HEALTH
List the various factors and stages involved in women's health and highlights the importance of health to women of all ages.

P Parameshwari 014
PROMOTING SEXUAL & REPRODUCTIVE HEALTH
Examines the critical issues relating to reproductive health and the several remedial measures required to safeguard women's health.

JL Gomathy 017
REPRODUCTIVE JUSTICE
Narrates the complicated issues involved in abortion and support the right of women in deciding what to do with the unwanted pregnancy.

Hameeda Yousuf Ali 021
IMPACT OF MALNUTRITION
Cites the problems of malnutrition and its severe impact on women's pregnancy, lactation and child welfare.

TT Rajkumar 024
WOMEN & HEALTH
Analyzes women's health problems and insists that women's health leads to healthy family, healthy society and healthy nation.

JL Uma Maheshwari 027
FEMALE SEXUAL PROBLEMS
Lists the various sexual problems of women – emotional, psychological & physiological – and suggests necessary medical measures to overcome the same.

WOMEN AND EDUCATION Part II

Pallavi Kumari 030
WOMEN'S EDUCATION

N
T
E
N
T
S
C
O
N
T
E

Highlights the importance of education in women's welfare and empowerment and the role of government and other stakeholders.

S Anitha 034
WOMEN'S POWER WITH LITERACY
Enumerates the cause for women's illteracy, its effect on society & nation and role of government and other non-governmental agencies in promoting the female literacy.

Dr Salma Parveen 039
WOMEN'S LITERACY
Identifies the causes for the slow rate of women's literacy, importance of female literacy, its impact on society and several ways to improve the literacy rate.

G Annalakshmi 042
GIRLS ARE NOT IN SCHOOLS?
Scans the various factors for poor enrolment of girls in schools, the role and duty of parents, society, government and other stakeholders.

B Vimala 045
WOMEN AND EDUCATION
Lists the different types of discrimination against girls and women with respect to education, benefits of women education and indicates how educated womenfolk leads to educated nation.

Dr K Sujatha 048
EDUCATION EMPOWERS
Clearly distinguishes how uneducated women cause several social and economic problems & how educated women become the potential power of the nation.

WOMEN AND FAMILY — Part III

Dr. NS Josephine 051
DIVORCE AND CHILDREN
Vividly picturizes the mental trauma, other emotional issues of children and post-divorce sufferings of the children.

J Rachel Priya 054
HAVING AN EXIT PLAN
Highlights the importance of being pro-active and the several systematic steps to be taken at various stages before saying the final 'goodbye'.

Srijaya 057
MARRYING THE DIVORCE
Discusses the experiences of US couple, legal and social pattern of divorce and sufferings of children after the divorce.

Dr S Kumaran 060
SAYING A GOODBYE
Narrates the circumstances forcing women to take a final decision and subsequent problems and challenges faced by a divorcee.

KS Mani Mohan 063
THE ROLE OF WOMEN IN THE INDIAN FAMILY
Lists the multivariant role of traditional Indian women in a family and her selfless commitment towards children and kith and kin.

Dr R Jayam 067
PROBLEMS FACED BY WOMEN IN LOVE MARRIAGE
Examines the intricacies and hurdles involved in a love-marriage and the consequent problems and challenges faced by the couple.

WOMEN AND VIOLENCE — Part IV

Dr S Radhika 070
DOMESTIC VIOLENCE AND WOMEN
Surveys various types of domestic violence, available legal provisions, persistent measures and steps taken by the government to create an awareness among the younger generation.

Dr S Jayalakshmi 073
FEMALE GENITAL MUTILATION

NTS CONTENTS

Describes the horrible and barbaric practice, their reasons and claims, consequential health hazards and briefs the role of UNFPA and UNICEF in eliminating this global age-old practice.

M Nithya 076
DOMESTIC VIOLENCE
Sketches the cycle of domestic violence and explains the symtoms and signs of several domestic violence and suggests some measures to prevent them.

K Meenakshi 079
VIOLENCE AGAINST WOMEN
Indicates violence against women at various levels – refugees camps, armed conflict, women migrant workers, custodial violence and violence within marriage, etc

N Jayachitra 082
WOMEN’S DOMESTIC VIOLENCE
Describes types of domestic violence – physical, emotional & verbal – and suggests preventive and interventive measures/remedies including counselling.

A Francis Panimathy 085
DOMESTIC VIOLENCE
Narrates various types of domestic violence against women and lists a number of causes, viz dowry, self-ego of husbands, illiteracy, poor economic background, societal habits and rituals.

Golda George 088
ATROCITIES ON WOMEN THROUGH THE AGES
Views some of the historical atrocities committed against women throughout the world and blames, subtly, the menfolk for their commissions and omissions.

P Priya 091
VIOLENCE AGAINST WOMEN IN INDIA – SOME ISSUES
A small study conducted in Madurai district of Tamilnadu seeking several causes and situations leading to violence against women and suggesting some precautionary steps to be taken.

Geetha Ravindran 093
DATING VIOLENCE
Warns about the potential threats waiting to happen when teanagers indulge in dating and gives some tips how to be pro-active to safeguard themselves.

ECONOMIC AND SOCIAL BETTERMENT — Part V

S Athistalakshmi 096
FEMINIZATION OF POVERTY
Amazingly shows how global poverty level is getting feminized and how the UN is taking series of measures to arrest this alarming trend, especially in African nations.

S Amutha 099
DECIDING TO DECIDE
Presents how women participate in corporate affairs, in spite of several hurdles like glass ceiling and take good and successful decisions, thus excelling themselves equal to men.

S Anitha 102
WOMEN EMPOWERMENT THROUGH STREE SHAKTHI SCHEME
Specifies a special scheme designed and implemented by Government of Karnataka and its methodology and benefits provided to women.

R Brindha 104
SOCIO-ECONOMIC EMPOWERMENT OF WOMEN IN INDIA
Describes several avenues, such as SHG, education, healthcare, microfinance, etc available to women to gain empowerment.

A Yasodha 108
ROLE OF RURAL SMALL FARM WOMAN IN ENHANCING THE HOUSEHOLD INCOME THROUGH DAIRY FARMING
Discusses the vast potential available in the rural small farms for women to augment their income and how governments and others are pro-active and encouraging.

Dr Viji Rajesh 111
WOMEN EMPOWERMENT THROUGH ECONOMIC BETTERMENT
Identifies various societal and cultural factors that act as hurdles for the economic betterment of women and discusses the several important and useful steps taken by government and other non-governmental agencies.

CONTENTS CON

S Veena 114
ECONOMIC BETTERMENT OF WOMEN
Shows several factors that lead to poor economic and financial status of women and their insignificant savings habits and possible remedial measures.

Dr MC Minimol 118
WOMEN EMPOWERMENT THROUGH SELF HELP GROUPS
A brief study to find out the social, economical and financial empowerment that is taking place through self-help-group and how women are enjoying the results.

S Arunkumar 122
IMPACT OF SHG ON WOMEN EMPOWERMENT
Describes the concept of SHG, how it is picking up, how it has become a successful factor for the empowerment of women.

Asma Farooque 125
WOMEN TURNING THE TIDES OF ENTREPRENEURSHIP
Vividly shows how inherent quality of multi-tasking are helping women to become entrepreneurs and how they are slowly, but steadily, moving towards contributing to the development of the country.

WOMEN AND GENDER EQUALITY — Part VI

A Sara 129
GENDER DISCRIMINATION
Lists the various stages at which girls and women are, sexually, physically and emotionally violated and discriminated and indicates that the only way to fight the societal stigma is education.

Dr CB Senthilkumar 132
GENDER GAP
Shows the steps taken by several countries to nattow down the gender gap and names five important criteria of measuring the empowerment of women.

B Chandravadana Nila 135
SEXISM AND GENDER INEQUALITY
Narrates how globally women get less attention to healthcare and other welfare measures and discusses the different types of gender inequality.

P Kokila 138
WOMEN EQUALITY
Analyzes how women are being differently and sketches some fictional characters designed in the literature to create the awareness of women empowerment.

M Sankara Lingam 141
GENDER INEQUALITY
Discusses seven types of inequality practised in a patriarchal society and suggests some measure to solve these inequalities.

WOMEN AND SOCIETAL FACTORS — Part VII

Dr Veena Tewari Nandi 145
ISSUES FACED BY WOMEN EXPATRIATES
Vividly narrates the reasons for expatriation by women and list various types of hurdles, issues and challenges experienced by women expatriates.

J Rajalakshmi 149
IMPEDIMENTS FOR WOMEN'S ACCESS TO RESOURCES
Explains how women are denied access to various resources, such as land, finance, education, healthcare, etc and how this denial has very serious impact on the society and nation.

R Vijayalakshmi 152
WOMEN TRAFFICKING
Identifies why women and sex trafficking take place , how this evil affects the society and lists the remedial measures taken by government and other human rights organizations.

J Sridevi 155
IMPACT OF WOMEN CELEBRITY ON TEENAGER
Describes the severe – emotional, sensual, physical, physiological & psychological – impact upon the teenagers especially girls by the advertisements featuring celebrities of both the gender.

TENTS CONTEN

R Usharani 158

WOMEN'S SOCIAL INTERACTION

Paper appreciates the multifacted role of women in the national building and the effect of empowering them in all walks of life is stressed.

CN Chaitrshree 161

WOMEN RIGHTS TO PROPERTY OWNERSHIP

Systematically highlits how women have been, from time immemorial, have been consistently denied rights to property ownership and indicates various initiatives recently brought by governments.

Dr S Archanabai 164

FEMINIZATION OF MIGRATION

Analyzes several reasons for migration of men and women and how the process of migration slowly gets faminized as more women – single mothers, unmarried women, widows and divorcees – tend to migrate for various reasons.

G Kalpana 167

SEX TRAFFICKING

Sketches how women are induced and seduced and finally reduced to slaves and how various initiatives, policies and measures taken by governments and other human rights activists could/would prevent this evil of the society.

Dr V Sasi Rekha 170

IMPACT OF PORTRAYAL OF WOMEN IN MASS MEDIA

Interesting and subtly describes how the curvaceous female figure are portrayed in religion, culture and society and how the same female body is getting exploited purely for all types of commercial activities in mass media.

Dr Mukta Dubey 174

WOMEN RESERVATION BILL AND DEMOCRATIC GOVERNANCE

In spite the constitutional provisions, initiatives of international organizaiton like UN, CEDAW, etc women role and participation in democratic governance remains very meager and it appears that women never get their rightful place in the near future.

S Nirmala Sugirtha Rajini 176

STATUS OF WOMEN IN INDIA

Briefs the status of women at various stages of history – ancient India, pre and post-independent India & modern India – and lists the various measures taken by governments to empower women.

Dr SP Kanaka Anbuselvam 179

A STUDY OF WOMEN SUICIDES

A brief report on Madurai district in Tamilnadu – supported by secondary data collected from several sources – traces the various reasons leading to female suicides and offers some plausible solutions.

RN Lavanya 181

SEXUAL HARASSMENT

Provides an elaborate list covering various types of sexual harassment, describes some of them in detail and offers some pro-active measures.

Dr S Vairamani 185

WOMEN AND INTERNET SEX

A live-study makes shocking revelations about the evil effects of internet on society and describes how young women are getting induced and sedued and ultimately become victims. Lists some internet sites to enable parents to take pro-active measures to protect children.

V Gowri 189

WOMEN AND ENVIRONMENT

Discusses the concepts and various theories of ecofeminism, describes some ecological movments initiated by women.

Dr Ashwini Ravi 192

MALE RAPE

Creates the awareness about male rape and lists various myths and realities of male rape. Interesting piece of attempt.

K Latha 195

CYBERCRIMES AND WOMEN

Narrates how modern young women getting trapped, lists some most common methods used in cybercrime and offers some precautions.

Dr Priya Mani 198

HUNGER AND POVERTY

Lists and describes several discriminating factors against women and explains how various social and economical welfare measures taken by governments tend to reach men, not women.

WOMEN AND INDUSTRY Part VIII

K Srinivasan 201
STRESS MANAGEMENT FOR WOMEN FARMERS & RANCHERS
Describes what is stress, lists various types of stress, types of stress experienced by women farmers and explains who these types of stress should be managed.

J Eugene 205
CURBING APATHY IN WOMEN WORKING IN HOTEL INDUSTRY
Shows how modern Indian women excel in different, espcially those considered as male domain, and how hotel industry offers various opporunities for women in recent times.

Dr Hemalata Agarwal 208
GLASS CEILING
Narrates the effects of glass ceiling on modern working women, how some women take the challenge and excel themselves and lists some famous women who broke the glass ceiling in several sectors.

M Radhikaa Shree 211
WOMEN IN INDUSTRY
Some major issues such as, maternity leave, leadership role, glass ceiling and sexual harassment, are discussed.

Dr P Priyadarsini 214
EMPLOYMENT OF WOMEN IN BPO
Traces the employment potential available for women in BPO, issues, problems and challenges – for example work-life balance - faced by women.

KB Priya 216
WOMEN AND THE INVISIBLE BARRIER
Wonders how women's participation at entry level which is 53% falls dramatically to 15% when they reach senior level. Analyzes the reasons and offers some solutions.

Dr Asha Nagendra 218
EMPOWERING WOMEN IN CORPORATES
A small study to find out the opportunities available for women in corporate world, and issues and problems they face in their career and how women meet these challenges.

B Neeraja 221
WORKING WOMEN V. WORK LIFE BALANCE
Describes issues involved in maintaining work life balance, various welfare measures an employer could provide and offers some suggestion to both, employee and employer to attain good work life balance.

Rizwana Atiq 224
THE EMERGING SEGMENT FOR THE MARKETERS
Distinguishes the buying pattern of the highly informed modern-day women and challenges to anticipate their highly volatile expectations.

Arti Chandani 227
W-POWER IN THE BANKING AND FINANCIAL SERVICE INDUSTRY
Examines some women bankers who excelled themselves and reached the summit, in spite of glass ceiling strategies.

Dr R Latha 230
WOMEN'S LEADERSHIP
Narrates hurdles towards leadership, with some global examples, faced by most of the modern career women.

R Lavanya 233
CHALLENGES FOR WOMEN EMPOWERMENT IN CORPORATE
Analyzes the women issues in the corporate world and possible solutions to be considered by all the stakeholders.

R Pankajakshi 236
TECHNOLOGICAL CHANGE AND THE ROLE OF WOMEN
Traces multidimentional women issues in the technological age and the multiprolonged approaches required to tackle them.

EMPOWERING WOMEN Part IX

B Harathi 240

EMPOWERING THE WOMEN

Suggests that the true empowerment is possible only when policy makers think out-of-box to provide necessary provisions in the budgets.

Dr N Ramachandran 244

EMPOWERMENT OF WOMEN IN INDIA

Wonders how to go about women empowerment, when the society especially women themselves are self-contradicting about women's rights and wrongs!

Amarjeet Singh Bohmra 246

WOMEN EMPOWERMENT

Several causes for gender discrimination, mitigating solutions and other useful suggestions are discussed.

Dr Pradnya Chitrao 249

EMPOWERMENT OF THE INDIAN WOMEN

Studies blatant gender discrimination of women in almost every segment of Indian society, hardship faced by women and other initiatives taken by the government.

S Anitha 255

EMPOWERING WOMEN

Focuses the role of central government through ICDS in empowering women.

Savitha Rani Ramachandran 258

WOMEN'S LIBERATION – A REDEFINITION

Critically examines the cause and effect of various feminine issues and problems faced by the modern Indian women.

WOMEN AND HUMAN RIGHTS

Part X

Dr K Vimala 260

WOMEN'S HUMAN RIGHTS

Describes the concept of human rights, history, origin and evolution of women's human right movement and other various organizational framework.

Dr Mita Mehta 265

WOMEN AND HUMAN RIGHTS

Lists the various types human rights violations against women noticed in India and possible remedial measures to be taken by the government.

V Sreedevi 268

HUMAN RIGHTS VIOLATIONS

Narrates the horrifying human rights violations against women practised in the Middle East countries.

A Devendran 271

WOMAN = HUMAN

Paper highlights why any type/kind of violations against women, subtle or otherwise, should be considered and ultimately treated as human rights violations.

Dr S Ramalingam 274

XX = XY?

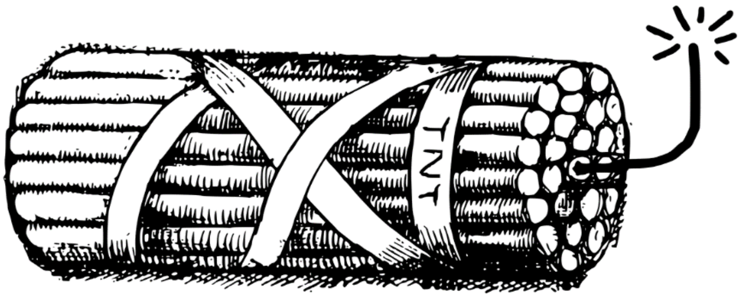
Adopting BBC broadcast in July 2003, paper, in the lighter vein, narrates the difference between two genders based on chromosomes.

Glossary 278

Abbreviations 337

ALFRED NOBEL

21 Oct 1833 <:> 10 Dec 1896

	 The founder of the prestigious Nobel Prizes made his fortune with a big bang by inventing dynamite, a stabilized form of nitroglycerin.

In 1888 the Paris press reported Nobel's death with the headline:
"Le marchand de la mort est mort" (the merchant of death is dead).

Actually, they had confused Alfred's brother's death with Alfred's,
but it was nevertheless a statement about Alfred Nobel.
Implicitly, it reflected the facts that:

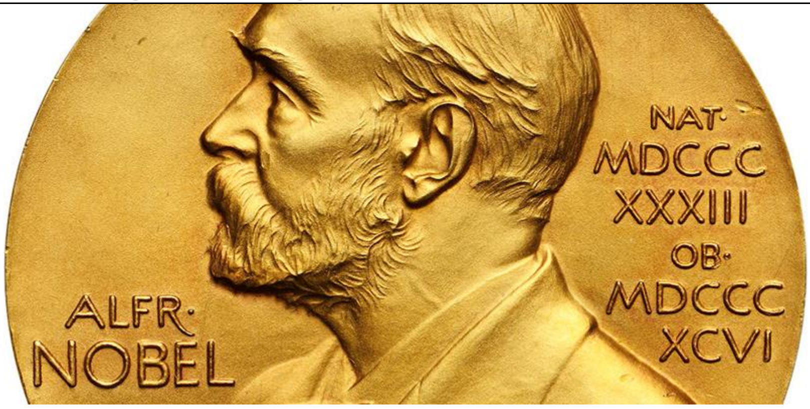
He was an important international figure, living in Paris;
He had made a great fortune in the arms business;
He was not popular in France (because of his smokeless powder business),
and in fact, he had few friends and many enemies and competitors.

****

One thousand times more powerful than black powder, dynamite expedited the building of roads, tunnels, canals, and other construction projects worldwide in the second half of the 19th century. Today its inventor's name is well known, but more for prizes of peace and of achievement than for explosives.

In the 18th and early 19th centuries the growing understanding of gases and the reactions that produce them was of great importance to modern industrial society. Not least was the production of explosives—substances that undergo reactions involving the release of heat and rapidly expanding gaseous products.

In making black powder Antoine-Laurent Lavoisier and E. I. du Pont were improving a technology known to Western cultures since the 14th century and even earlier in China and the Far East. By the mid-19th century much more powerful explosives were being created by treating various organic substances with nitric acid. Among these new explosives was dynamite, a stabilized form of nitroglycerin, invented in 1867 by Alfred Nobel (1833–1896).



The Obituary reported:

"Alfred Nobel, who became rich by finding ways to kill more people faster than ever before, died yesterday."
Nobel was probably stung by this criticism because, however unlikely it may seem, he had pacifist leanings.

****

Here's a brief look at the famous scientist, inventor, industrialist and founder of the annual honor that recognizes those who have conferred "the greatest benefit to humankind".

- Born on October 21, 1833, in Stockholm, Sweden
- His family was descended from Olof Rudbeck, the best-known technical genius in Sweden in the 17th century
- Alfred grew up in Russia and studied chemistry and technology in France and the US
- He was also very interested in social and peace-related issues, and held views that were considered radical during his time
- His first overseas company was established in Krümmel, Germany
- He invented dynamite in 1866 and received a patent a year later
- In 1895, Alfred was one of the founders of Elektrokemiska Aktiebolaget (EKA) – which was acquired by Nobel Industries in 1986. Eight years later, in 1994, Nobel Industries merged with Akzo to create Akzo Nobel
- When he died at his home in San Remo, Italy, in 1896, he held 355 patents
- The contents of the will only became known after his death.
- In his will, he left around $265 million in today's money, which is used to this day to award Nobel Prizes in Physics, Chemistry, Physiology or Medicine, Literature and Peace.
- The first Nobel Prize ceremony was held at the Royal Academy of Music in Stockholm in 1901. The first Nobel Prize in Physics went to Wilhelm Röntgen for his 1895 discovery of X-rays.

https://www.akzonobel.com/en/about-us/our-history/alfred-nobel

https://www.nobelprize.org/alfred-nobel/biographical-information/

https://www.nobelprize.org/alfred-nobel/alfred-nobels-life-and-work/

https://www.sigmapisigma.org/sigmapisigma/radiations/fall/2018/legacy-alfred-nobel

First Day Cover commemorating 1901 Nobel Prize winners, 1961.

Alfred Nobel as a young man.

Front side of one of the Nobel Prize medals

The other side of the Nobel Peace Prize medal represents a group of three men forming a fraternal bond. translated "For the peace and brotherhood of men". "Prix Nobel de la Paix", the relevant year, and the name of the Nobel Peace Prize laureate is engraved on the edge of the medal.

The reverse side of the Nobel Prize medal awarded for both Physics and Chemistry.

The reverse side of the Nobel Prize medal for Physiology or Medicine.

The obverse side of the Nobel Prize medal for Economics.

The reverse side of the Nobel Prize medal for Economics.

5 Facts About Alfred Nobel

1. Alfred Nobel was primarily known for inventing dynamite, but he was actually more interested in peaceful applications of chemistry. He held 355 different patents, including inventions related to synthetic rubber, leather, and various industrial processes.

2. Nobel was fluent in six languages: Swedish, Russian, English, French, German, and Italian. He corresponded with many scientists and intellectuals from around the world and frequently traveled to different countries to collaborate with them.

3. While Nobel is famous for leaving his fortune to establish the Nobel Prizes, his decision to do so was largely influenced by a premature obituary published in a French newspaper which sarcastically called him the "Merchant of Death" due to his invention of dynamite. This incident led Nobel to reconsider his legacy and make provisions in his will for the establishment of the Nobel Prizes, including the Nobel Peace Prize.

4. Nobel had a strong interest in literature and wrote poetry and drama during his free time. His works often explored themes of love, loneliness, and the complexities of human emotions. Some of his writings were published under a pseudonym to avoid the association with his scientific reputation.

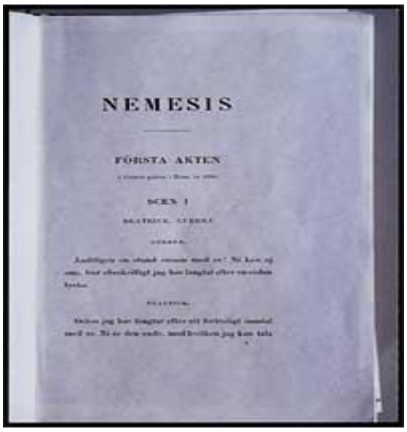
5. Nobel never married or had any children. He dedicated most of his life to his work and had a reputation for being a loner. He often lived in seclusion, even though he had a vast social circle and corresponded with numerous intellectuals. Despite this, Nobel was reportedly a very charismatic and charming person when he did socialize.

Even though he maintained a fast pace of armament development into the very last years of his life, one may surmise that Alfred Nobel's premature obituary may have caused him to ponder his legacy. On November 27, 1895, at the Swedish-Norwegian Club in Paris, he signed the final version of his will, a document of scarcely one page.11 Having no wife or children, he left 6 percent of his vast wealth to various relatives. With the remaining 94 percent he established five12 prizes to be awarded each year:

> *"The whole of my remaining realizable estate…shall constitute a fund, the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit to mankind."*

Nobel Prize, Any of the prizes awarded annually by four institutions (three Swedish and one Norwegian) from a fund established under the will of Alfred B. Nobel. The will specified that awards should be given "to those who, during the preceding year, shall have conferred the greatest benefit on mankind." Since 1901, prizes have been awarded for physics, chemistry, physiology or medicine, literature, and peace; since 1969, a sixth prize, established by the Bank of Sweden, has been awarded in economic sciences. The Nobel Prizes are regarded as the most prestigious prizes in the world.

A portrait of Alfred Nobel in one of his laboratories.



NEMESIS

FÖRSTA AKTEN

SCEN I

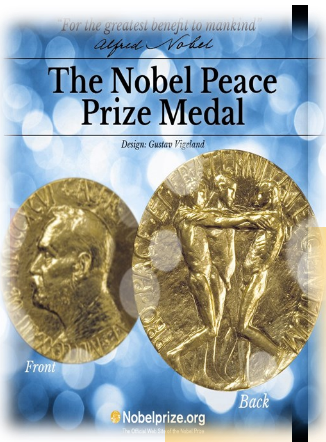
The play 'Nemesis' was written by Nobel during the last year of his life.

Alfred died in San Remo, Italy on December 10, 1896. In his last will and testament, he wrote that much of his fortune was to be used to give prizes to those who have done their best for humanity in the field of physics, chemistry, physiology or medicine, literature and peace.

Not everybody was pleased with this. His will was opposed by his relatives and questioned by authorities in various countries. It took four years for his executors to convince all parties to follow Alfred’s wishes.

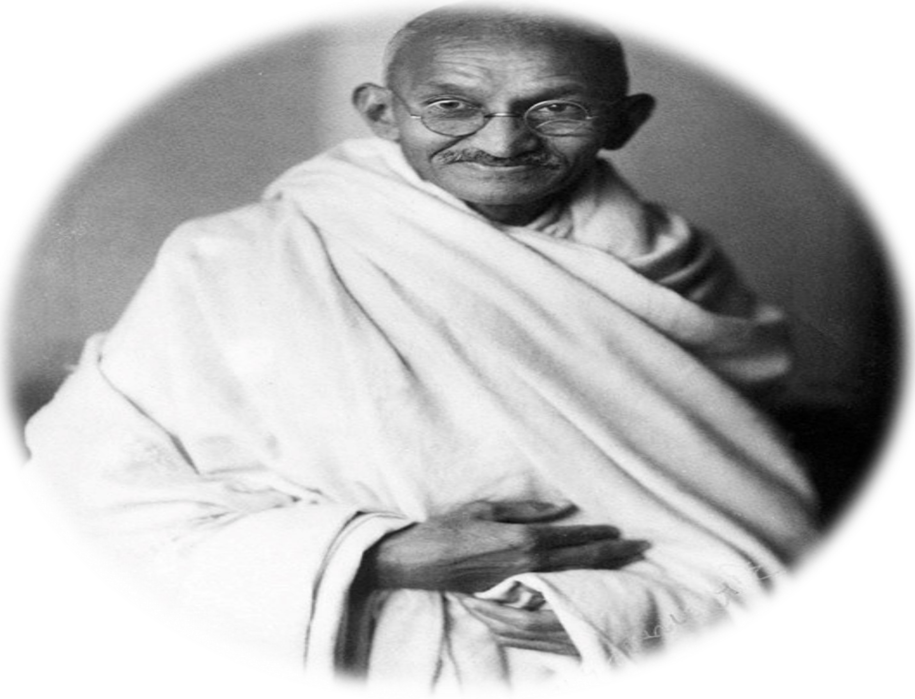
In 1901, the first Nobel Prizes in Physics, Chemistry, Physiology or Medicine and Literature were first awarded in Stockholm, Sweden and the Peace Prize in Kristiania (now Oslo), Norway.

"The prizes for physics and chemistry are to be awarded by the Swedish Academy of Sciences; that for physiological or medical achievements by the Karolinska Institute in Stockholm; that for literature by the Academy in Stockholm; and that for champions of peace by a committee of five persons to be selected by the Norwegian Storting. It is my express wish that when awarding the prizes, no consideration be given to nationality, but that the prize be awarded to the worthiest person, whether or not they are Scandinavian."


For the greatest benefit to mankind
Alfred Nobel
The Nobel Peace Prize Medal
Design: Gustav Vigeland
Front
Back
Nobelprize.org

THE MISSING LAUREATE

Mahatma Gandhi & NOBEL Peace Prize



Mohandas Gandhi (1869-1948) has become the strongest symbol of non-violence in the 20th century. It is widely held – in retrospect – that the Indian national leader should have been the very man to be selected for the Nobel Peace Prize. He was nominated several times, but was never awarded the prize. Why?

ISBN 978-93-95054-85-0
9 789395 054850

Please visit these web links to know MORE !

https://www.nobelprize.org/prizes/themes/mahatma-gandhi-the-missing-laureate/